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CAMERA OBSCURA CAMERA LUCIDA

Essays in Honor of Annette Michelson

EDITED BY

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MALCOLM TURVEY

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Edited by Richard Allen and Malcolm Turvey

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Preface

Rosalind Krauss

Annette Michelson returned to New York from France in the mid-1960s with an intimate knowledge of French language and culture. This meant, among other things, that a whole world of intellectual speculation was open to her that remained closed to less linguistically gifted American colleagues. In the late '60s, the translation business had not yet geared up to process the work of Barthes, Saussure, Lévi-Strauss, and Derrida into English; and so the Structuralist reconception of language – in all its subtlety and elegance – had not yet impacted the world of aesthetic discourse. In 1970, in *Art and the Structuralist Perspective*, her lecture at the Guggenheim Museum, Michelson spoke of the elegance and reduction of Structuralist diagrams in an effort to fuse cultural practice and this new domain of conceptualization. In closing, she passed to what she saw as the disappointment of Structuralism's hostility to abstract art, a philistinism unworthy of the movement's extraordinarily formal thinkers.[1]

Michelson's critical project had, from her entry into New York's thriving art world, committed itself to those painters, sculptors, and dancers whose work would have been most recalcitrant to these Parisian heroes even though, in her eyes, it should in fact have been most available to the proponents of system, exchange, and the formalization of meaning.

In January 1967, Michelson eagerly reviewed an exhibition that her colleagues at *Artforum* shunned from a sense of its difficulty, its closure against the universe of discourse. This was '10 x 10,' an exhibition at the Dwan Gallery of the work of Agnes Martin, Robert Smithson, Robert Morris, Carl Andre, Jo Baer, Ad Reinhardt, and Michael Steiner – the burgeoning movement of Minimalism which Michelson had embraced immediately upon her arrival. Her review spoke of this difficulty and the way it had produced the vocabulary of dismissal in the early critical literature, as words such as 'rejective,' 'aggressive,' and 'boring' were applied to it. Her assessment of the situation was quickly stated: 'The problem, as I see it, is the increasingly urgent necessity of some conceptual or philosophical framework within which criticism can propose a comprehension of the dynamics of art history and of art making.'[2]

The opportunity to craft such a conceptual framework came in 1969 when Michelson was commissioned to write the text for Robert Morris's major exhibition at the Corcoran Museum, and the central proponent of Minimalism had to be introduced to an audience who would probably find his work, indeed,

'reductive' and 'boring.' Initially, she turned to American figures rather than French ones for models of a rejection of 'expressiveness.' Both John Cage and Charles Sanders Peirce figured here. From Peirce came the concept of 'firstness': 'a sense of quality rather than a perception. Non-cognitive, it is "absolutely present".' But then, acknowledging the dependence of Morris's work on the precise conditions of its context and on their effect on the viewer's own body, her references turned to France and the philosophy of Maurice Merleau-Ponty. Speaking of Morris's earliest public manifestation at the Green Gallery and the experience it forced on the viewer, she wrote:

> ... that experience – the 'reduction' on which it is posited, its reflexiveness, the manner in which it illuminates the nature of our feeling and knowing through an object, a spatial situation, suggest an aesthetic analogy to the posture and method of phenomenological inquiry, as it is familiar to us in the tradition of contemporary philosophy. It is the commitment to the exact particularity of experience, to the experience of a sculptural object as inextricably involved with the sense of self and of that space which is their common dwelling...[3]

From Merleau-Ponty's insistence on 'knowledge through the body' to Morris's beginnings in the dance projects of Yvonne Rainer and Simone Forti, commonly referred to as the dance of 'task performance,' Michelson was quickly led to a concern with dance and theater as the accompanying aesthetic mode of Minimalism. Approaching *Artforum* with the project for a special issue on performance, she found nothing but resistance, a refusal paired with the editorial rejection of proposals to translate central theoretical texts from French into English. One of these, Michel Foucault's 'Ceci n'est pas une pipe,' found its way into the first issue of *October*, the journal Michelson founded with me once both of us had resigned from the editorial board of the magazine.

Our project for *October* began as an arm of contemporary avant-garde practice, understanding that practice as overtly theoretical, given the conceptual complexity of the recent essays published by Donald Judd and Robert Morris. Theorizing such practice meant not only translating important theoretical texts but attempting, as well, to locate the specificity of new forms of practice, such as video – the medium that had been adopted by many advanced artists in the early 1970s. This aspect of the project was in evidence in the first issue, and is still in evidence in our recently published 100th issue. Working with Annette Michelson on this magazine has been an adventure in the conceptualization of many aspects of advanced art – from film to sculpture, from performance to dance. Throughout, her commitment has been exemplary.

Notes

1. Annette Michelson, 'Art and the Structuralist Perspective,' *On the Future of Art* (New York: The Solomon R. Guggenheim Museum, a Viking Compass Book, 1970), pp. 37-59.
2. Michelson, '10 x 10: Concrete Reasonableness,' *Artforum* V, no. 5 (January 1967), pp. 30-31.
3. Michelson, *Robert Morris: The Aesthetic of Transgression*, exhibition catalogue (Washington D.C.: Corcoran Gallery of Art, 1969). Excerpts reprinted as 'Robert Morris: An Aesthetics of Transgression,' in *Mimimalism*, ed. James Meyer (London: Phaidon, 2000), pp. 248-50.

Introduction

Malcolm Turvey

Annette Michelson, in her multiple roles as critic, editor, translator, and teacher has made a unique contribution to the study of artistic modernism. Her thinking and taste have exerted an enormous influence – both direct and indirect – over several generations of scholars (and in some cases practitioners)[1] of advanced film and art. This volume of essays, written by former students, by colleagues and friends, is intended to honor and build on her singular legacy. For, as I shall argue in this introduction, not only has her work greatly influenced the way modernism in both its elite and popular forms is understood, but it still has much to teach us.

It is impossible to summarize, in a short introduction such as this, all of Michelson's insights – developed in a number of seminal texts over a number of years – into the work of specific artists such as Brakhage and Snow, Morris and Kubrick, Duchamp and Cornell, Eisenstein and Vertov. In order to do some justice to the force, power, complexity, and multiplicity of her legacy, I will instead try to convey a sense of her considerable impact on Anglo-American criticism of advanced art in general, both actual and potential, since her return to New York in the middle of the 1960s from fifteen years living in Paris.[2]

I

This impact has been at least threefold. First of all, as Rosalind Krauss points out in her preface to this volume, Michelson was one of the first to argue that advanced artistic practice of the 1960s was creating a 'crisis of criticism' similar to crises created by previous modernist revolutions. In the texts she writes immediately following her return to New York in the mid-'60s, we find her repeatedly insisting that Anglo-American criticism of the time – predicated on what she terms, in a word that has reverberated down the years, an 'idealist' model of an expressive author (*RM* 7; *CK* 57) – is incapable of understanding or appreciating the new art.[3]

This recognition initially took place in relation to the Minimalist sculpture, film, and dance produced in New York in the 1960s, which Michelson encountered and immersed herself in on her return from Paris. This artistic produc-

tion had been greeted with incomprehension and hostility by many critics – especially those who were part of the critical orthodoxy that had solidified around Abstract Expressionist painting.[4] Michelson diagnosed this 'crisis of criticism' to be the result of what she called Minimalism's 'apodictic' character (*RM* 13; *AP* 56), which resisted the traditional 'critical techniques' of 'aesthetic metaphor, gesture, or statement' (*RM* 13). In order to do justice to Minimalism's 'resistance to semantic function' (*AP* 55), a whole new repertory of techniques and conceptual frameworks were needed by critics. Michelson, following the steps taken by the most articulate of the Minimalists such as Robert Morris and Donald Judd, immediately dedicated herself to developing these in a series of essays on those she saw as the most important artists working in and across the three major Minimalist media: Morris (sculpture, 1969), Michael Snow (film, 1971), Yvonne Rainer (dance, 1974).

Michelson, however, also immediately realized that the critical revolution necessitated by Minimalism had implications well beyond Minimalist art. For one thing, by exceeding the 'idealist' model of expressive author exemplified by a Pollock or a Kline, Minimalism seemed to be part of a more general trend toward questioning the 'sovereignty' of subjectivity that was also evident in contemporary French thought. At a time when Jacques Derrida's name was barely known in the Anglo-American world, Michelson drew on his most recent writings to unearth the 'metaphysical' assumptions about subjectivity at work in orthodox art criticism in her 1969 essay on Morris, assumptions which Morris and others were challenging in their work:

> It is, however, now suggested that 'whenever we use the notion of form ... we are forced to resort to the assumption of a source of meaning. And the source or medium of this assumption is necessarily the language of metaphysics.' That language has been, as well, the language of our art criticism, and its presuppositions the source of its proliferating claims for art as 'saying,' 'expressing,' 'embodying,' 'bodying forth,' 'incarnating,' 'hypostasising,' 'symbolizing,' 'dramatizing,' when it is not 'figuring,' 'presenting,' or 'representing'. (*RM* 9)[5]

Although Derrida is just one of a number of thinkers, French and otherwise, that Michelson draws on in this essay, it was this particular gesture of turning to contemporary French thought for a conceptual framework for understanding advanced art that was to prove particularly influential in the years that followed. And it surely does not need to be belabored here that the questioning of the 'sovereignty' of subjectivity and author was to become a major, even obsessive, theme of contemporary criticism.

But beyond this, Michelson recognized that there was a whole modernist tradition, traversing the distinction between elite and popular art forms, that remained misunderstood, even ignored, within Anglo-American criticism

due to that criticism's dependence on the 'idealist' model, and that would benefit from the fruits of the 're-definition of the limits of critical discourse' she was in the process of pioneering. Thus, the very same year she writes her essay on Morris, we also find her writing on a very different 'object' that had been greeted with much the same perplexity and incomprehension as Minimalist sculpture (and for many of the same reasons), namely, Stanley Kubrick's Hollywood blockbuster 2001: A Space Odyssey (1969):

> Like that black monolith whose unheralded materialization propels the evolution of consciousness through the three panels of the movie's narrative triptych, Kubrick's film has assumed the disquieting function of Epiphany. It functions as a disturbing structure, emitting, in its intensity of presence and perfection of surface, sets of signals ... Those signals, received by a bewildered and apprehensive community (tribe? species?) of critics, have propelled them, all unwilling, into a chorus of dismay, a choreography of vacillation, of approach, and recoil, to and from the 'object.' We know that song and dance: they are the old, familiar projection of a crisis in criticism. And still the 'object' lures us on. Another level or 'universe' of discourse awaits us. (*CK* 56)

And in the years following, we find her extending her critical innovations back in time to key, often neglected, works of the pre-war avant-garde – Marcel Duchamp's Anemic Cinema (1926), the films of Joseph Cornell and Dziga Vertov, Sergei Eisenstein's unrealized projects – as well as René Clair's science fiction comedy Paris qui dort (1923).

Although the particular crisis of criticism generated by Minimalism has passed, and the critique of the 'idealist' orthodoxy has itself become orthodox, Michelson has continued to play a major role in developing new techniques and conceptual frameworks to meet the demands on criticism of advanced art, both indirectly in the work she has encouraged and promoted as an editor (first of *Artforum* and then *October*), a teacher (professor of cinema studies at New York University), a translator (of thinkers such as Bataille, Lacan, Deleuze), an author of prefaces and introductions (Noël Burch's *Theory of Film Practice*); and more directly as a writer of essays. Her recognition of the limitations of criticism in the 1960s, and her turn to other intellectual traditions to find alternatives, have proved, I think, to be exemplary for critics over the last three decades.

Second, the alternative techniques and conceptual frameworks Michelson herself pioneered in her effort to overcome the critical limitations exposed by Minimalism together constituted, as David Bordwell has rightly pointed out, a new way of understanding art, a new paradigm of interpretation.[6] Although Michelson initially developed this paradigm in relation to Minimalism in the late 1960s, its richness and power has meant that it has been extended well be-

yond Minimalism and has yet, I think, to be exhausted. It can be termed 'philosophical,' and while familiar to us now due to its success, it was almost entirely foreign to Anglo-American criticism of the time. It has had, I think, an incalculable influence on criticism, akin to one of Kuhn's 'paradigm shifts' in the natural sciences. As Bordwell puts it in relation to film criticism, through this paradigm, 'Michelson's impact [has been] comparable to that of [Andrew] Sarris and *Movie*.'[7]

In answer to those critics schooled in Abstract Expressionism who greeted Minimalism with bewilderment and hostility due to what Krauss calls 'its closure against the universe of discourse,' Michelson argued that the works of Morris and others had a purpose or function quite other than that of 'expression' or 'communication,' one which she termed 'philosophical' or 'cognitive.' They pose

> for us, after all, the conditions of experience, of perception and apperception, eliciting, within our culture, a response to those perceptions which is cognitive. Our perception of the work of art informs us of the nature of consciousness. This is what we mean when we say – as I do say – that, although art no longer means or refers, it does have a deeply cognitive function. (*AS* 57)

The philosophical function of Morris's work was the result of his 'transgression' of traditional conventions governing the organization of space and time in sculpture. His 'simple,' 'assertive' sculptures overturned the conventional distinction between the aesthetic, 'synthesized virtual space' of the sculptural object, and the non-aesthetic, 'operational' space of the museum or gallery, or indeed any real environment, in which 'we live and act' (*RM* 37-43):

> Consider the *Corner Piece*. Perceived as a plane, it is the broadest side of a triangle, obtruding ultimately into a primary sense of available space. The plane stands in the way of, on our way to, the corner. Subverting and intruding upon the angle, it forces recognition of that angle.
>
> Now, the space enveloping and sustaining the apprehension of these structures is a space common to object and beholder. The corner of the *Corner Piece* is the corner of the gallery space in which we stand, in which we are enclosed. That space subtracted from us by a slab is real; one might stand in it. It hovers over an area of floor *on* which one might stand. The space absorbed, reflected by the mirrored cubes is that of the gallery in which we now stand, perceiving ourselves as standing – and as perceiving. In these instances, then, the central focus of attention is the manner of the solicitation – through placing, scale, unity of shape, volume, the nature of materials and the spectator's sensed relationship of the self as a perceiving, corporeal presence, to the object in question; the sense of co-presence. (*RM* 37-39)

Meanwhile, building on his experience in the temporal media of dance and performance, Morris used and extended Duchampian strategies in order to inscribe time into his sculpture, a medium traditionally thought of as 'convert[ing] process into static object' (*RM* 49). Hence his brilliant 'process' works, such as the *Box with Sound of its Own Making* (1963).

Michelson's core insights into Minimalism's spatial and temporal innovations are now basic axioms of scholarship on '60s art, and have been extended and complicated by others, most notably Rosalind Krauss.[8] But their implications for criticism have been much greater than what they revealed about Minimalism per se. For Michelson was keen to show that artists like Morris had done much more than overturn artistic conventions. Turning to the 'phenomenologically grounded perceptual theory' of philosophers such as Charles Sanders Pierce and Maurice Merleau-Ponty (*AS* 115), Michelson argued that Morris's works – by drawing the spectator's attention to his own body, to the space in which he and the sculpture stood, and to the time of the making and viewing of the sculpture – were asking the spectator to reflect on the fact that temporality is 'the condition or medium of human cognition and aesthetic experience,' and that 'knowing' (quoting Merleau-Ponty) 'is the body's functioning in a given environment' (*RM* 23; 45). In other words, Morris, and like-minded artists, had passed from a concern 'with things seen to that of seeing itself.' They were engaging in *philosophical* investigations into the nature of consciousness and related issues such as perception, by prompting reflection on these topics on the part of the spectator:

> Attention to the simplicity of [the] structure [of Morris's sculpture], to its *qualities*, directs the [beholder] back, as it were, upon the quality of his perception. The inner rehearsal of its modes, of the aspects and parameters of that perception, conduces to an experience of a reflective nature ... Morris's questioning of a self-contained system of virtual space is impelled by a recognition of the most profound and general sense in which our seeing is linked to our sense of ourselves as being bodies in space, knowing space through the body. (*RM* 45)

The paradigmatic notion propelling this paradigmatic analysis – that an art work can occasion reflection on philosophical topics such as 'What is seeing?'; that art 'as exploration of the conditions and terms of perception ... converges with philosophy and science upon the problem of reality as known and knowable' (*CK* 58) – has proved to be a singularly fertile one for criticism of the last thirty years, having been extended well beyond the understanding of Minimalism and the avant-garde to include mass and popular art. Certainly it has for Michelson's work. In the same year as her text on Morris, she applies it in her analysis of 2001, arguing that while watching this film, 'Viewing becomes, as always but as never before, the discovery, through the acknowledge-

ment of disorientation, of what it is to see, to learn, to know, and of what it is to be, seeing' (*CK* 58). And two years later in her text on Snow, she claims that Wavelength (1967) prompts the spectator to reflect on the fact that, quoting Edmund Husserl, 'to every perception there always belongs a horizon of the past' (*TS* 174-75).

As she has moved away from the Minimalist moment and its particular preoccupation with temporality and the body, Michelson has extended this paradigm of interpretation to other key philosophical topics related to consciousness, in particular illusion in her texts on Vertov (1972), Duchamp (1973), and Paul Sharits (1974), and later language in her texts on Hollis Frampton (1983, 1985), drawing on other conceptual frameworks beyond phenomenology in the process. For example, in her first major text on Vertov, she argues that one of Vertov's ambitions, at least in Man with a Movie Camera (1929), is to transform his camera 'from a Magician into an Epistemologist,' from a tool of illusion into a tool of enlightenment, through a 'revelation, an exposure of the terms and dynamics of cinematic illusionism.' And one of the ways he does this, Michelson argues, drawing on Jean Piaget's theory of 'developmental epistemology' as her conceptual framework, is through the employment of filmic equivalents of the 'logico-mathematical operations characteristic of adults,' such as reverse motion. (For 'it is the most general characteristic of adult logic, as distinguished from that of children, to be reversible' [*MM* 108; 111].)

Acknowledging Michelson's achievement here does not rest on the claim that this paradigm of interpretation, in which art is conceived of as prompting reflection on philosophical topics on the part of the spectator, was invented by her *ex nihilo*. For it certainly has precedents and precursors within the Western tradition. In its confidence in the individual spectator's capacity for reflection, in its assumption that true knowledge comes from questioning something for oneself, in its belief that art can give rise to such questioning and therefore enlighten (so opposite to the suspicion of art as an instrument of power and domination today enshrined in cultural studies), it seems to come straight out of the Enlightenment. Closer in time, one could, for example, see it as a broadening of Brechtian and Greenbergian 'reflexive' models of art – in which art is conceived of as occasioning in the spectator a reflection on socio-political realities (Brecht) and medium-specific properties (Greenberg) – to include philosophical topics; or the extension to film of the sort of philosophical interpretations of the 'New Novel' that Michelson had been exposed to when living in France in the 1950s. Rather, Michelson's achievement, I think, has been to alight on, refine, introduce, and promote this paradigm with such force and vigor in an Anglo-American context that was largely hostile to the notion of art, and especially film, as performing analytic and speculative functions.

Through this paradigm, she has shown that art can potentially do a lot more than 'express' the 'personality' of its author.[9]

As if this were not enough, Michelson not only pioneered this new philosophical paradigm for interpreting art. She also historicized it by proposing, early on, a particular model of the history of modernism, one in which the function of advanced art is *of necessity* to philosophize due to modernism's 'elevation of doubt to an esthetic principle' (*CK* 59). This model has been influential in the form of a distinction it proposes between two basic types of modernist art, a distinction that has been crucial for postmodernist critics: the 'secular' type that accepts the impossibility of theological or metaphysical certainty as the modern condition, and the 'religious' or 'idealist' type that searches for aesthetic substitutes for the theological certainties lost in a secular age.

According to this model, the modernist rejection of realism and mimesis from the middle of the nineteenth century onward was the result of the 'crisis in the Western metaphysical tradition' occasioned by the conversion from a Christian to a secular society.[10] With the loss of the secure, unquestioned theological certainties provided by Christianity, 'reality [is] no longer assumed as pre-defined or pre-existent to the work of the [artistic] imagination.' To put it another way, the artist is no longer compelled to mimetically represent and celebrate a pre-existent, divinely ordered reality. Rather, the artist is now free to question and intervene in, with the same modern hubris as the philosopher or scientist, the order of things through formal experimentation: 'Art now takes the nature of reality, the nature of consciousness in and through perception, as its subject or domain.'

In her early essays, Michelson suggests that this 'elevation of doubt to an esthetic principle' gives rise to two basic trends in modernist art. The first, dominant until the 1960s and exemplified by Abstract Expressionism, finds everyday, contingent reality and our ordinary knowledge of it lacking without the theological certainties of Christianity. It provides an aesthetic substitute for such certainties by transcending the limits of quotidian reality and the way we standardly come to know it in the redemptive form of 'a work of total autonomy, self-referring, self-sustaining and self-justifying,' a work of total 'immediacy' and 'presence.' This 'dream of absolute immediacy pervading our culture and our art ... replaces, in a secular age, a theology of absolute presence' (*AS* 56):

> 'Examine the mutations of things,' says St. Augustine, 'and thou wilt everywhere find "has been" and "will be." Think on God and thou wilt find "is" where "has been" and "will be" cannot be.' Absolute presentness being the attribute of Divinity, to experience 'the work in all its depth and fullness' as within 'a single, infinitely brief instance' is to dwell in Presence, in 'conviction' as in Revelation. (*RM* 19)

However, this is not the only shape that idealism can take in modernism. Surrealism, for all is radicalism, constitutes another:

> A notion of the 'noumenal' persists. Surrealist thinking is haunted by demons and old ghosts such as a 'transcendence,' subjected periodically to rituals of exorcism, but never quite dispelled. Surrealist 'immanence' is, in fact, and more than most, a 'transcendence' in disguise... Dedicated to the abolition of Christian myth and its repressive vestiges, Surrealism derived its strength and its contradictions from that myth. (*BS* 73)

There is, however, another, more marginal, secular trend in modernism, exemplified, perhaps, in the pre-war era by Duchamp's aesthetic of ambiguity, which artists of the '60s such as Morris and Rainer can be seen as extending: 'It is, I think, a prime quality of Morris's work that it offers ... the terms of a sharpened definition of the nature of the sculptural experience ... in a manner wholly consistent with a commitment to the secularist impulse and thrust of modernism' (*RM* 23):

> There are, in the contemporary renewal of performance modes, two basic and diverging impulses which shape and animate its major innovations. The first, grounded in the idealist extensions of a Christian past, is mythopoeic in its aspiration, eclectic in its forms, and constantly traversed by the dominant and polymorphic style which constitutes the most tenacious vestige of that past: expressionism. Its celebrants are: for theater, Artaud, Grotowski; for film Murnau and Brakhage; and for the dance, Wigman, Graham. The second, consistently secular in its commitment to objectification, proceeds from Cubism and Constructivism; its modes are analytic and its spokesmen are: for theater, Meyerhold and Brecht, for film Eisenstein and Snow, for dance, Cunningham and Rainer. (*YR* 33)

Rather than attempting to find an aesthetic substitute for lost theological certainties, 'to dwell in Presence,' to transcend the limits of everyday, contingent reality and the way we standardly know it, this trend analyzes and questions quotidian reality and our ordinary knowledge of it itself. Morris, for example, rejects the metaphysical 'virtual space' of traditional sculpture and focuses on real space and the spectator's standard perception of it. In a parallel gesture, Rainer rejects the metaphysical 'synthetic time' of traditional dance in favor of 'a time that is operational, the time of experience, of our actions in the world' in her 'ordinary language' dance (*YR* 58). In this way, modernist art can be seen as recapitulating the same fissure that exists in Western philosophy between those who seek new metaphysical certainties beneath or beyond contingent reality and the way it is normally known (Descartes, Kant, Heidegger), and those who, rejecting the possibility of (finding) metaphysical certainties, focus

on everyday reality and our ordinary knowledge of it (Hume, Locke, Wittgenstein).[11]

The distinction between these two trends, I think, has proved to be absolutely crucial for postmodernist criticism. Postmodernist art is often understood by its critics as rejecting, on ethical and political grounds, the theological or metaphysical aspirations of the dominant idealist trend within modernism, and turning, in part through a recuperation of the marginal secular trend exemplified by Duchamp, toward everyday, contingent, social, political, cultural, psychological, corporeal realities – the 'return of the real' charted by Hal Foster, one of Michelson's colleagues at *October*, in a recent book.[12] Interestingly enough though, Michelson's own work has parted company with her postmodernist colleagues by increasingly blurring this distinction, a point to which I will return.

I have argued that, beyond her numerous insights into specific artists and movements such as Morris and Minimalism, Michelson has influenced Anglo-American criticism of the last thirty years in at least three fundamental ways: by recognizing the limitations of 'idealist' criticism and playing a major role in finding alternatives to it; by pioneering an alternative herself – the so-called philosophical paradigm of interpretation; and by introducing the distinction between secular and idealist modernism so crucial to postmodernism. This festschrift, however, is not only intended to honor Michelson's contribution to the past, but to show that there is a great deal still to be learned from her work. It is to the task of identifying the potential legacy of her scholarship for the future that I now turn.

II

In preparation for writing this introduction, which involved reading and rereading almost the entirety of her oeuvre, I initially attempted to categorize Michelson's work using concepts typically employed in the analysis of art criticism today, ones that might be familiar and therefore of help to an educated reader new to her writing. But it soon dawned on me that it is the varieties of its *resistance* to such categories that, in part, give her work its unique identity in the contemporary critical landscape, and through which we can, I believe, locate its enduring value.

To start with, anyone ignorant of the fact that Michelson has been a professor of cinema studies for the past thirty years or so would, I suspect, be unable to identify from her essays whether their author is an art historian, a film scholar, or indeed a philosopher interested in art, such is the diversity of artis-

tic aspirations and conceptual frameworks she has concerned herself with. Her body of work resists disciplinary identification, ranging voraciously across artistic media and theories, from the sculpture of Morris and the dances of Rainer to the poetry of De Stijl and the linguistic riddles of Frampton, from phenomenology and Deconstruction to Kleinian and Lacanian psychoanalysis.

This resistance is partly to be attributed to the fact that, rather than pursuing an education in the American academy with its various specializations, she began her career as a translator and critic in France, receiving an education – both formal and informal – in artistic modernism and philosophy in the Paris of the '50s and early-'60s. However, it is also due, I think, to her early conviction that cinema is the pre-eminent medium of modernism, a conviction that explains in part, I suspect, her decision to place cinema at the center of her mature work. For as she points out repeatedly in her early essays, cinema has seemed to almost every major avant-garde movement to instantiate its aspirations:

> There is a special sense in which almost all the major authentic movements and styles of this century – Futurism, Surrealism, Dadaism, Constructivism – reacted to the growth of cinema. Each fresh revision of esthetic and social values staked its claim upon film, claiming as well that its aspirations and energies subsumed and articulated a filmic ontology. Thus [for example], the early developments of montage spoke to Surrealists as the conjoining of disparate objects in the synthesis of Lautréaumont's Encounter, rendering concrete and vivid that Encounter as the primary mode of consciousness. (*RH* 49-50)

Michelson's conviction that cinema is the modernist medium par excellence stems, in part, from her philosophical paradigm. Given that, according to this paradigm, what essentially defines the modernist artist is his freedom to question, like the philosopher or scientist, the order of things, a freedom rooted in the 'crisis in the Western metaphysical tradition,' then the ultimate modernist medium would be one that best allows the artist to philosophize, to 'elevate doubt to an esthetic principle,' to question 'the nature of reality, the nature of consciousness in and through perception.' Cinema, she argues in her early essay on 2001, is that medium, due to its unique combination of 'lived reality,' rooted in its photographic nature, with enormously powerful tools, such as editing, that allow the artist to reconstruct that 'lived reality' to an unprecedented degree:

> [The] movement towards abstraction which animates the style and esthetics of modernism posed, for every art form, the problem of what Ortega calls 'the incompatibility of the perception of lived reality with the perception of artistic form' ... Cinema [is] the art form whose temporality created another space in which 'lived re-

> ality' could once again could be figured, restructured ... Cinema reintroduces not only 'lived reality,' but an entirely new and seemingly limitless range of structural relationships allowing for the reconciliation of 'lived reality' with 'artistic form'. (*CK* 58-59)

Hence, as she begins to write more and more on cinema from 1969 onward, we find Michelson suggesting that film is the superior medium for prompting the spectator to reflect on the sort of philosophical topics being raised at the time in other media by modernists. Examples include illusion, and temporality being 'the condition or medium of human cognition and aesthetic experience.'

> There are cinematic works which present themselves as analogues of consciousness in its constitutive and reflexive modes, as though inquiry into the nature and processes of experience had found in this century's art form, a striking, a uniquely direct presentational mode. The illusionism of the new, temporal art reflects and occasions reflection upon, the conditions of knowledge; it facilitates a critical focus upon the immediacy of experience in the flow of time. (*TS* 172)

Hence, Michelson has tended to focus throughout her career on those filmmakers – Snow, Cornell, Duchamp, Rainer, Eisenstein, Warhol – who originally or primarily work in other media, demonstrating in her essays how a modernist desire for the philosophical possibilities afforded by cinema intensifies in these artists' work in another medium, eventually propelling them into cinema.

Whether or not one shares Michelson's conviction that cinema is the preeminent modernist medium, it has, I am suggesting, at least in part driven her resistance to disciplinary specialization, her insistence that avant-garde film must be analyzed within the context of modernism as a whole. In acting on this conviction, she has shown several generations of scholars what an important role cinema has played in modernism, how central it has been to the aspirations of avant-garde artists working in and across other media. To quote Bordwell again, 'her philosophically informed essays [have] helped make the study of avant-garde film part of modern art criticism and history.'[13] In the process, she has provided an exemplary model of authentic inter-disciplinarity for contemporary and future scholars, by which I mean true expertise in more than one medium or discipline. The value of such inter-disciplinarity surely does not need explicating in a contemporary context in which disciplines are (often wrongly or absurdly) thought of as 'disciplinary.'

Second, for someone who helped pioneer the turn to contemporary French thought in the late 1960s in order to render the advanced art of that moment intelligible, one finds in Michelson's work a salutary resistance to being too closely identified with a single French thinker, or indeed with the trends in French thought known as 'structuralism' and 'post-structuralism.' Over the

past thirty years, we have witnessed Althusserians, Lacanians, Derrideans, Foucauldians, Deleuzians using art and culture as so much grist for the mill – as 'proof' – of their chosen theories. But while these names appear in Michelson's essays, they do so alongside the much less fashionable ones of Descartes, Kant, Hegel, Emerson, Husserl, Sartre, Merleau-Ponty among many, many others outside the post-structuralist canon. Indeed, one gets the sense when reading Michelson that the whole of the Western tradition is at her fingertips, not just the few French thinkers who have dominated so much of the scholarship of the last few decades.

The reason Michelson has refused to ally herself too closely with a single theoretical school, whether French or otherwise, is, I submit, that she is instinctively a *critic*, not a theorist. Whereas a theorist of art begins with a theory, say Deconstruction, in which he believes (usually with religious zeal), and then typically applies it top-down (often ad nauseam) to art and culture, the critic begins with the art work and, bottom-up, goes in search of the concept, the framework, the theory that can best illuminate the art work, that can best render it intelligible. The theorist of art, in other words, is committed first and foremost to the theory, and uses the art work to illustrate the theory. The critic, however, is committed first and foremost to the art work and to explicating its meaning and value. The critic will therefore typically employ the most apt conceptual framework to illuminate the art work, regardless of what it may be, and will often be agnostic over whether it is true or not.

Michelson's essays provide a signal example of a prodigious, bottom-up, critical imagination at work. While she has shown a preference for certain conceptual frameworks at certain moments in her career – most notably phenomenology in the late 1960s – when there is a choice to be made between an art work and a theory, she chooses the art work. For example, just as Anglo-American critics were first learning about Structuralism and beginning to apply it to art, Michelson warned in 1970 that: 'The application of the classical Saussurian linguistic model will do a certain violence to art and poetry alike, to their stubborn resistance to meaning and to their desire to redefine the possibility of meaning through playfulness and speculation' (*AP* 52). According to Michelson, however fashionable, Structuralist theory, rooted in Saussurian linguistics, was unsuitable for the criticism of advanced art of the moment, because of that art's apodicity, its resistance to 'any notion of code and message in [its] stubborn claim for autonomy, immediacy, and absoluteness' (*AS* 51). Hence, the same comment Michelson makes in 1979 about the attitude of Minimalist artists such as Morris to the conceptual frameworks they employed could be made about her own work: 'Artists on this continent have refrained from giving to their successive sets of postulates, axioms, and methodological options the status of orthodoxy; these have functioned instead as working hypotheses,

generative, productive, or, when not, easily disposable' (*AS* 115). Due to its instrumental, agnostic attitude toward theories, Michelson's work remains an exemplary model for contemporary and future scholars who want to employ sophisticated conceptual frameworks in the act of criticism, yet who believe that the task of the critic is not to proselytize on behalf of a fashionable theory, but to render avant-garde experimentation intelligible.

Third, Michelson's work resists conventional categorization not only because it ranges across artistic media and conceptual frameworks, but because it has examined artists with very different aspirations and sensibilities within modernism. Indeed, if one examines her bibliography, one finds that she is often thinking and writing about seemingly antithetical artistic projects *simultaneously*. For example, the same year she writes her essay on Morris and his proposal (again quoting Merleau-Ponty) that 'to perceive is to render one's self present to something through the body' (*RM* 45), she also produces her text on Stanley Kubrick's Hollywood blockbuster 2001, with its 'progress toward disembodiment' (*CK* 57). The year she interviews Richard Serra in *October* about his non-narrative films is the year she publishes her essay on René Clair's prewar narrative science fiction film Paris qui dort. She composes her essay on Marcel Duchamp's Anemic Cinema, with its ambiguity and destruction of 'illusionist' space, the same year she writes on Joseph Cornell's films, with their Surrealist preservation of 'illusionist' space. Her foreword to Hollis Frampton's collected writings, in which she identifies the refined, even sublime linguistic riddles in his work, is written just one year after her text on the 'poetics of anal glossolia' in De Stijl. And I could extend this list of improbable combinations.

While most scholars of the arts specialize in a single artist, medium, movement, period, form or tradition, one finds in Michelson's output an attempt to resist such specialization, and an ability to *think together* very different artistic projects with very different aesthetic properties. The signal instance of this is surely the special issue of *Artforum* she edits in 1973, in which she stages an encounter between the work of two filmmakers usually thought of as polar opposites, Brakhage and Eisenstein, an editorial gesture greeted immediately (and predictably) by perplexity and condemnation.

How are we to understand this 'critical athleticism,' and what does it have to teach us today?

Others have pointed to external reasons for it, such as Gregory Taylor in his essay on the politics surrounding the Eisenstein/Brakhage special issue of *Artforum*.[14] But I think one can identify a reason internal to Michelson's critical project.

If one returns to Michelson's first major text on cinema, 'Film and the Radical Aspiration,' published in *Film Culture* in 1966, one finds her sketching a

pre-lapsarian myth (and by myth I don't mean that it's not true) of an Edenic age of cinema and modernism, the 1920s, defined, like most utopias, by wholeness and unity.

> Generally speaking ... discussion, fruitful or academic, took place within a context of broad agreement as to the probable or desirable directions of the medium. Styles, forms, inventions and theoretical preoccupations were largely complementary, not contradictory. A spectrum, rather than a polarity, of possibilities was involved. The Surrealists' admiration of American silent comedy, reflected in the work of Artaud and Dulac among others, the universal excitement over the achievements of Russian film, Eisenstein's openly acknowledged debt to Griffith and that of the young Dreyer to both, testify to a certain community of aspiration.
>
> The excitement, the exhilaration of artists and intellectuals not directly involved in the medium was enormous. Indeed, a certain euphoria enveloped the early filmmaking and theory. For there was, ultimately, a very real sense in which the revolutionary aspirations of the modernist movement in literature and the arts on the one hand, and of a Marxist or Utopian tradition on the other, could converge in the hopes and promises, as yet undefined, of the new medium. (*FR* 407)

This Eden is destroyed, according to Michelson, by a number of ruptures in the late-'20s/early-'30s: between art and commerce, between silence and sound, between narrative and non-narrative, between art and politics, between film and the other arts. And ever since, cinema (and modernism) has been haunted by this 'Fall from Grace':

> Film, our most vivacious art, is young enough to remember its first dreams, its limitless promise, and it is haunted, scarred, by a central, ineradicable trauma of dissociation. The attendant guilt and ambivalence, their repressive effects, the manner above all, in which a dissociative principle has been alternately resisted or assumed, converted into an aesthetic principle, the manner in which this resistance or conversion modified or redefines cinematic aspirations are, like everything concerning film, unique in the history of Western culture. (*FR* 405-6)

However, avant-garde film of the 1960s is in a position to overcome many of these dissociations, thereby potentially recreating the modernist Eden of the 1920s: 'The extraordinary advantage of American cinema today does lie partly in the possibilities of ... convergences and cross-fertilizations [with the other arts]. It may be that American film is unique in its access to a multiplicity of vital efforts unprecedented since the immediately post-Revolutionary situation in Russia' (*FR* 419).

Whether or not there was such an Eden in the 1920s (or 1960s), the promise or dream of one has, I think, driven Michelson's work, because everywhere in it one finds an effort – with cinema at its center – to unify, to overcome divi-

sions between theory and practice, between art and politics, between different artists, media, movements, periods, forms, and traditions within modernism, to point to continuities where others see differences, including continuities between elite and popular forms.[15] For example, the reason she views Snow's Wavelength as a 'masterpiece' is, in part, because of the fact that it is a 'grand metaphor for narrative form' (*TS* 175; 176), thereby overcoming the rupture between narrative and non-narrative. It is therefore able to 'unite, in attention and fascination, critical opinion of a great many kinds'; and it transcends 'the *a priori* distinctions between the "linear" and the "vertical," the "prose" and "poetic" forms, the "realist" and "mythopoeic," the "vertical" and "horizontal," the styles of continuity and of montage which had animated the film theory and polemics of the last forty years or so' (*TS* 177).

Another example of this effort at overcoming divisions concerns the distinction between secular and idealist art. Postmodernist critics typically attempt to erect a wall between these two traditions, condemning the latter on ethical and political grounds, and proselytizing on behalf of the former. But it seems to me – and here I must confess to being unsure of myself and to moving into the realm of speculation (if I haven't already) – that as Michelson writes more and more on cinema from the early '70s onward, it becomes harder and harder to distinguish between the two trends in her writing. Certainly, in her first two essays on single filmmakers – Kubrick and Snow – they are viewed very much like Morris and Rainer as secular artists who analyze and question quotidian reality and our ordinary knowledge of it. By abandoning 'the familiar framework of existence' through space travel, for example, Kubrick 'redeliver[s] us in rebound ... into the familiar, the known, the Real' (*CK* 60). And as we have already seen, Snow's Wavelength prompts the viewer to reflect on the fact that 'to every perception there always belongs a horizon of the past' (*TS* 174-75). But in the essays on filmmakers that follow, Michelson increasingly focuses on those whose work has at least one feature in common with idealist art forms such as Abstract Expressionism and Surrealism: it employs cinema to transcend the limits of ordinary human consciousness and perception, and alight on forms of knowledge unavailable in quotidian human existence. While these filmmakers differ in many respects, they all have a similar conception of cinema: they view it as a powerful visual technology that, much like a telescope or microscope, escapes the limitations of everyday human seeing and knowing by revealing reality in a manner impossible for normal human vision. Three examples will have to suffice here.

In her 1974 essay on Rainer, Brakhage is placed in the idealist trend, Eisenstein in the secular. A year earlier, in her contribution to the Eisenstein/Brakhage special issue of *Artforum*, Michelson follows this distinction by differentiating, as one might expect, between Eisenstein's epic style with its gaze

of 'analysis' (*CL* 33-34) and Brakhage's lyric style with its gaze of 'fascination ... eluding analytic grasp' (*CL* 37). Yet, among the many other commonalities she then goes on to point out between the two masters, she argues that both transform the spectator's everyday experience of time in a remarkably similar way. Eisenstein, for example in the lifting of the bridge sequence in October (1927), 'reorders the action through a temporal staggering ... The movement forward and then back in time suspends the action in an abeyance of time's passing, investing the sequence with *the fullness of the present*' (*CL* 34; my emphasis). Similarly, Brakhage 'radicalize[s] filmic temporality in positing the sense of a continuous present, of a filmic time which devours memory and expectation in *the presentation of presentness*' (*CL* 37). And they both do this for the same reason: to give the spectator access to forms of seeing and knowing reality beyond the constraints of the ordinary. Eisenstein 'creates radically new spatiotemporal objects of apprehension' (*CL* 34), thereby granting them a pure visibility that 'conjures away any intimation of that which is not there, then present' (*CL* 33). Brakhage's temporal and spatial manipulations produce a 'cinema of the hypnagogic consciousness aspiring to a rendering of a totally unmediated vision' (*CL* 37). While Eisenstein's 'Intellectual Cinema' and Brakhage's 'Cinema of Vision' are in many ways opposed – the one is analytical, the other positively anti-analytical – both reveal reality in a way unavailable to normal human perception and consciousness.

In her second major essay on Snow, published in *October* in 1979, Snow, who has previously been labeled a secular artist in contradistinction to the idealist Brakhage in the Rainer essay, is now seen as perpetuating Brakhage's insistence on the 'idealist primacy of vision.' Both position the spectator as 'sovereign'; both accord him 'the status of transcendental subject' (*AS* 115), Snow most spectacularly in La Région Centrale (1971), with its 'disembodied mobility of the eye-subject' (*AS* 121). Indeed, it is Brakhage who now seems the more radical: the spectator whose visual mastery 'was threatened by the spatial disorientations of, say, [Brakhage's] Dog Star Man ... could respond, as if in gratitude, to Snow's apparently gratifying confirmation of a threatened sovereignty' (*AS* 118). Rather than interrogating quotidian reality and our ordinary knowledge of it, Snow, like Eisenstein and Brakhage, reveals reality in La Région Centrale in a manner unavailable to normal human vision, by way of a 'disembodied' style of camera movement.

In her essay on Vertov's Three Songs of Lenin (1934), published in *October* in 1970, Vertov – whose eminently secular goal in Man with a Movie Camera is, as we have seen, to transform his camera from a tool of illusion into a tool of enlightenment through a 'revelation, an exposure of the terms and dynamics of cinematic illusionism' – is now transforming 'Christian themes of martyr and saint, of Savior and Paraclete' in the creation of a 'Leninist iconography'

(*KI* 26). The function of Three Songs of Lenin, according to Michelson, is 'not only to commemorate' Lenin, but to 'definitively inter' him, 'to block the return of the dead (the stone set over the grave to impede the corpse's return' (*KI* 38). The film does this, in part, by transforming the spectator's standard experience of time in a manner akin to much funerary art. It 'inserts, within our experience of lived time, the extratemporality of death' through slow motion and freeze-frame (*KI* 32):

> It is ... in the film's instants of the freezing of the frame – that of Lenin and of the hurtling advance of the 'train of history' – that we feel, within the cinematic figuration of this work, the release of Lenin into the frozen atemporality of the still photograph, which figures the acknowledgement of the loved object as dead, and therefore, as Christian Metz has put it, 'one who can be loved as dead'. (*KI* 38)

Here again is a filmmaker employing cinema to escape the limitations of normal human perception and consciousness for the sake of a project with distinctly religious overtones: the elevation of Lenin, 'the Lost Leader,' to the 'sublime inane' (*KI* 38).

Even though Michelson's mature work begins with a consideration of how Minimalists, such as Morris and Rainer, overturn the idealist tradition exemplified by Abstract Expressionism through a secular analysis of everyday reality and our ordinary knowledge of it, it is as if she nevertheless retains, unlike the postmodernist critics who follow her, a profound reverence for at least one feature of idealist art: the desire for transcendence, for escape from the limits of the merely human, the earthly, the corporeal, the ordinary, the 'here and now,' in search of forms of certainty and knowledge unavailable in quotidian human existence. Hence her focus on those filmmakers who conceive of cinema as a powerful visual technology that, by escaping the limitations of everyday human seeing and knowing, reveals reality in a manner impossible for normal human vision. In her work, it seems to me, the secular and idealist traditions are in permanent conversation, if not dialectical interaction, even though at certain times she displays the discomfort with the idealist trend typical of postmodernism. It is as if she has much less confidence than postmodernist critics in the possibility, or even desirability, of expunging idealist transcendence from advanced art, as if the desire to escape the constraints of the ordinary in search of something better through art is somehow natural to the human condition, and the critic of modernism must therefore think it together with the secular project of analyzing the ordinary.

If I am right about this – and I am not sure that I am – then it accounts for at least two other features of Michelson's work. First, it explains, at least in part, her attraction to Eisenstein and Vertov, the two filmmakers she has spent the most time thinking and writing about. For the different projects of these two

filmmakers can both be seen as bridging the gap between secular and idealist. Both employ the cinema to escape ordinary human perception and consciousness, but they do so with the eminently secular intention of helping human beings to gain greater knowledge about, and thereby mastery over, reality. As Michelson puts it in a text published in 1992, the work of these two filmmakers:

> Involving differences of method, was driven and sustained by an underlying hypothesis and by an aim, both generally shared. That western man now disposed of a new and powerful cognitive instrument which gave him access to a clearer and fuller understanding of existence in the world: such was the general hypothesis ... The general aim was no less than the transformation of the human condition through a cinematic intensification of cognitive accuracy, analytic precision, and epistemological certitude. (*WH* 62)

As this quotation indicates, by bridging the gap between idealist and secular in this way, Vertov and Eisenstein also exemplify another defining convergence of the modernist Eden of the 1920s between: 'the revolutionary aspirations of the modernist movement in literature and the arts on the one hand, and of a Marxist or Utopian tradition on the other.' For in using cinema innovatively to transcend the constraints of ordinary seeing and knowing, granting human beings greater knowledge of and power over reality, it becomes in their hands a political and/or utopian instrument of social change, potentially allowing human beings to transform 'the human condition' for the better. It is for this reason that Michelson names the journal she starts with Rosalind Krauss in 1976 after Eisenstein's film October, a work that celebrates the 'manner in which aesthetic innovation may be a vector in the process of social change' (*AO* 3).

Second, it accounts for the *naturalistic* explanation Michelson provides for the excitement about cinema's revelatory power among filmmakers of the 1920s, one which, once again, allows her to bridge the gap between secular and idealist. According to this explanation, the desire among the generation of the 1920s to use cinema to transcend the limits of everyday perception and consciousness in order to reveal and control reality is grounded in something thoroughly ordinary and human, indeed something natural and primitive – the basic childhood fantasy of omnipotence and omniscience. The cinema, Michelson argues, was the last and most powerful of the 'philosophical toys' of a bygone era (*OE*), ones that grant their users a 'ludic sovereignty' over the universe, or features of it, such as the laws of space and time (*WH* 65). Its invention generated the same 'epistemological euphoria' as advanced scientific paradigms such as Einstein's theory of relativity, a theory which seemed in the

early twentieth century to represent 'the dethronement of time as a rigid tyrant imposed on us from the outside':

> One wants, upon reflection, to say that the theory [of relativity] consoled and, at least in part, reaffirmed a sovereignty that had had, as we know, to withstand the blows to human narcissism inflicted by Galilean, Darwinian and Freudian thought. One might further claim that this sovereignty was nowhere more powerfully or immediately expressed than in the filmmaker's ludic reinvention of spatio-temporality at the editing table. The manner in which film's elementary optical processes produced, through the use of acceleration, deceleration, freeze-frame and reverse motion, the visible suspension of causal relations within the phenomenal world gave hope that the cinema could be the articulate medium of the master theoretical systems of modernity: of psychoanalysis, historical materialism, Einsteinian physics. (*WH* 65)

But this 'religious,' hubristic, cosmic desire to transcend the constraints of normal human existence, and, God-like, control the universe itself, is rooted in nothing more ordinary and merely human than 'our abiding infantile fantasy of omnipotence' (*DC* 16; *KI* 23). Once again, therefore, secular and idealist meet.

But whether I am right about this specific issue or not, what is indisputable is the fact that Michelson has examined artists with very different aspirations and sensibilities within modernism, from idealists like Brakhage, to those like Eisenstein and Vertov who see cinema as a powerful visual technology that reveals truths about reality in a manner impossible for normal human vision, to those like Morris and Rainer who analyze quotidian reality and our ordinary knowledge of it, and to others such as Duchamp, Cornell, Clair, and Kubrick. In doing so, she has consistently pointed to continuities where others see differences – continuities between different artists, media, movements, periods, forms, and traditions within modernism. Her criticism therefore resists being labeled using categories such as 'postmodernist,' just as it resists disciplinary identification and allegiance to a theoretical school or trend.

I think the lesson that contemporary and future critics have to learn from these varieties of resistance concerns the vision of modernism they imply, and the 'critical athleticism' this vision entails. Michelson's writings demonstrate again and again that the categories set up by critics of advanced art usually do not hold. It is as if Michelson's criticism is constantly warning us that modernism is too rich, or perhaps too contradictory, to be atomized into such categories. Or as she puts it in 1970, 'The history of art is, like that of philosophy, a history of ambivalences' (*AP* 51). While this vision of advanced art makes the task of criticism immeasurably harder, requiring the critic to think together very different artistic projects, Michelson nevertheless shows us that it can be done.

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In this introduction, I have tried to convey a sense of Annette Michelson's considerable impact – both actual and potential – on Anglo-American criticism of advanced art. All of the essays in this volume honor this legacy by attempting to build on one or more aspects of it that I have mentioned. The editors and contributors hope she will enjoy them.

I am greatly indebted to Richard Allen, Rosalind Krauss, Stuart Liebman, and Federico Windhausen for reading and responding to this essay.

Abbreviations for Annette Michelson's Writings

AC 'Anemic Cinema: Reflections on an Emblematic Work,' *Artforum* XII, no. 2 (October 1973), pp. 64-69.
AO 'About OCTOBER,' *October* 1 (Spring 1976), pp. 3-5.
AS 'About Snow,' *October* 8 (Spring 1979), pp. 111-25.
AP 'Art and the Structuralist Perspective,' in *On the Future of Art* (New York: Solomon R. Guggenheim Museum, a Viking Compass Book, 1970), pp. 37-59.
BS 'Breton's Surrealism: The Peripeties of a Metaphor, or, A Journey Through Impossibility,' *Artforum* V, no. 1 (September 1966), pp. 72-77.
CK 'Bodies In Space: Film as "Carnal Knowledge",' *Artforum* VII, no. 6 (February 1969), pp. 53-64.
CL 'Camera Lucida/Camera Obscura,' *Artforum* XI, no. 5 (January 1973), pp. 30-37.
DC 'Dr. Crase and Mr. Clair,' *October* 11 (Winter 1979), pp. 31-53.
FR 'Film and the Radical Aspiration' (1966), reprinted in *Film Culture Reader*, ed. P. Adams Sitney (New York: Praeger, 1970; reprinted New York: Cooper Square Press, 2000), pp. 404-22.
KI 'The Kinetic Icon in the Work of Mourning: Prolegomena to the Analysis of a Textual System,' *October* 52 (Spring 1990), pp. 16-51.
MM '"The Man with the Movie Camera": From Magician to Epistemologist' (1972), reprinted in *The Essential Cinema*, ed. P. Adams Sitney (New York: New York University Press, 1975), pp. 95-111.
OE 'On the Eve of the Future: The Reasonable Facsimile and the Philosophical Toy,' *October* 29 (Summer 1984), pp. 3-20.
RH 'Rose Hobart and Monsieur Phot: Early Films from Utopia Parkway,' *Artforum* XI, no. 10 (June 1973), pp. 45-57.
RM *Robert Morris: The Aesthetic of Transgression*, exhibition catalogue (Washington D.C.: Corcoran Gallery of Art, 1969), pp. 7-75.
TS 'Toward Snow (Part I),' *Artforum* IX, no. 10 (June 1971), pp. 30-37.

WH 'The Wings of Hypothesis: On Montage and the Theory of the Interval,' *Montage and Modern Life, 1919-1942*, ed. Matthew Teitelbaum (Cambridge, Mass.: MIT Press, 1992), pp. 60-81.

YR 'Yvonne Rainer – Part I: The Dancer and the Dance,' *Artforum* XII, no. 5 (January 1974), pp. 57-63.

Notes

1. In her contribution to this volume, the filmmaker, cinematographer, and photographer Babette Mangolte acknowledges Michelson's influence on her own practice. Other examples include Michelson's starring role in Yvonne Rainer's film *Journeys from Berlin*. Michelson talks about her role in this film in 'Lives of Performers: Annette Michelson Discusses Acting in "Journeys from Berlin",' with Sally Banes, *Millenium Film Journal* 7/8/9 (Fall/Winter 1980-81), pp. 69-84.
2. An analysis of her art criticism of the 1950s and early 1960s, as well as her role disseminating French thought and culture during this period, must await another occasion.
3. To Anglo-American analytic aestheticians, this 'idealist' model is probably better known as the expression concept of art.
4. But it wasn't only critics of painting and sculpture who seemed incapable of understanding Minimalism. P. Adams Sitney's article 'Structural Film,' published in *Film Culture* in 1969, is widely seen – unfairly in my view – as an example of a film critic unsuccessfully attempting to understand Minimalist film using outdated critical techniques and frameworks similar to those employed by critics of Abstract Expressionist painting and sculpture.
5. Michelson is here quoting Derrida's 'La Forme et le Vouloir-Dire: Note Sur la Phénomenologie du Language,' *La Revue Internationale du Philosophie* 81 (1967), p. 278.
6. David Bordwell, *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema* (Cambridge, Mass.: Harvard University Press, 1989), pp. 58-64.
7. Ibid., p. 61.
8. At the beginning of her seminal book *Passages in Modern Sculpture* (New York: Viking Press, 1977), Krauss acknowledges her debt to Michelson in the following way: 'The effect of [Michelson's] thinking has had a great deal to do with the importance which issues of temporality assume in the discussion that follows' (p. vi).
9. Michelson has also promoted other, related, paradigms that have allowed scholars to move beyond an expression concept of art. For example, she wrote the introduction to the English translation of Noël Burch's *Theory of Film Practice*, which proved to be a seminal text for 'Neo-Formalist' film scholars such as David Bordwell. Indeed, we find in Bordwell's work a version of Michelson's philosophical paradigm: 'What, then, distinguishes aesthetic perception and cognition from the nonaesthetic variety? In our culture, aesthetic activity deploys such skills for nonpractical ends. In experiencing art, instead of focusing on the pragmatic re-

sults of perception, we turn our attention to the very process itself. What is nonconscious in everyday mental life becomes consciously attended to' (Bordwell, *Narration in the Fiction Film* [Madison: University of Wisconsin Press, 1985], p. 33). Within film scholarship, Neo-Formalism is probably the most sophisticated contemporary paradigm for analyzing the work of a filmmaker without reducing it to 'expression.'

10. Unless indicated otherwise, all quotations in the following paragraphs come from *CK* 58-59.
11. There is also, arguably, a third trend, a negative theology, which perpetually laments and/or celebrates the loss of metaphysical certainty, exemplified, in my view, by the work of Derrida.
12. Hal Foster, *The Return of the Real: The Avant-Garde at the End of the Century* (Cambridge, Mass.: MIT Press, 1996). An example of a postmodernist critic employing this distinction is Mark Cheetham, *The Rhetoric of Purity: Essentialist Theory and the Advent of Abstract Painting* (Cambridge: Cambridge University Press, 1991).
13. Bordwell, *Making Meaning*, p. 61. In this, she has not been entirely alone. The work of Peter Wollen, a contributor to this volume, immediately comes to mind.
14. Gregory T. Taylor, "The Cognitive Instrument in the Service of Revolutionary Change": Sergei Eisenstein, Annette Michelson, and the Avant-Garde's Scholarly Aspiration,' *Cinema Journal* 31, no. 4 (Summer 1992).
15. Michelson has recently stated that she continues to 'stand by' most of 'Film and the Radical Aspiration' today. See 'Round Table: Obsolescence and American Avant-garde Film,' *October* 100 (Spring 2002), p. 128.

The Logic of an Illusion

Notes on the Genealogy of Intellectual Cinema

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In his influential book *Techniques of the Observer*, Jonathan Crary traces the intellectual history of vision, visual technologies, and the interest in illusion. He starts with the *camera obscura*. In his analysis of this device, Crary closely follows Richard Rorty, who in his book *Philosophy and the Mirror of Nature*, describes the Cartesian intellect as a *camera obscura* – an empty, dark space in which images are projected onto a screen:

> In the Cartesian model, the intellect *inspects* entities modeled on retinal images ... In Descartes' conception – the one which became the basis for modern epistemology – it is *representations* which are in the 'mind.' The inner Eye surveys these representations hoping to find some mark which will testify to their fidelity.[1]

Crary in his own way repeats this important claim:

> In the Second Meditation, Descartes asserts that 'perception, or the action by which we perceive, is not a vision ... but solely an inspection by the mind'... For Descartes, one knows the world 'uniquely by perception of the mind,' and the secure positioning of the self within an empty interior space is a precondition for knowing the outer world. The space of the *camera obscura*, its enclosedeness, its darkness, its separation from the exterior, incarnates Descartes', 'I will now shut my eyes, I shall stop my ears, I shall disregard my senses.'[2]

According to Crary, the *camera obscura* is an epistemological model because it transforms the randomness of sensory data into a rational, intellectual vision whose apparatus 'corresponds to a single, mathematically definable point, from which the world can be logically deduced by a progressive accumulation and combination of signs. It is a device embodying man's position between God and the world.'[3]

The assertion that the *camera obscura*, an instrument of illusion, was used in Descartes' times as a model for rational understanding is, in my opinion, questionable.[4] But even more questionable is the way Crary uses it to describe the evolution of the conceptualization of vision in Western culture. In his view, the *camera obscura* gradually loses its dominance as a model, and the objective ra-

tionality it guaranteed is progressively replaced by a conception of vision as subjective along with an acute interest in illusion, in particular in optical illusion. This shift from rational, objective epistemology to subjective vision and illusion, according to Crary, opens the way to all the innumerable nineteenth century optical toys, and eventually cinema.

It is symptomatic that in Crary's history such figures as Descartes, Locke, and Leibnitz are gradually replaced by famous psychologists – Johannes Müller, Helmholtz, Purkinje. This shift from philosophy to psychology is obviously justified by the fact that illusions are not primarily an object of epistemological inquiry but psychological study. The main event in this transition from philosophy to psychology was, according to Crary, the publication by Johannes Müller of his *Handbuch der Physiologie des Menschen* (1833 and later). Crary claims that this book has shaped 'one of the most influential ways in which the observer was figured in the nineteenth century, a way in which a certain "truth" about sight and cognition was depicted.'[5]

Shortly summarized, Müller's discovery can be reduced to two main, interconnected observations. First, Müller noticed that the same cause (for instance, electricity) can produce different sensations in different nerves (the sensation of light in optic nerves, and of touch in skin). Second, he saw that different causes can generate the same sensation in one and the same nerve. Thus was established a fundamentally arbitrary relation between stimulus and sensation. Crary concludes: 'Again the *camera obscura* model is made irrelevant. The experience of light becomes severed from any stable point of reference or from any source of origin around which a world could be constituted and apprehended.'[6] According to this reading, the conception of vision as subjective became dominant due to the discovery of the arbitrary relation between sensations and their causes. However, the real situation was much more complicated than Crary allows.

The best known student of Müller – Hermann von Helmholtz in his *Treatise on Physiological Optics* (arguably the most influential single work on vision in the nineteenth century) – took this arbitrary relation between sensations and their causes for a fundamental psychological fact. However, for him, this separation didn't result in the impossibility of knowing things:

> Every image is similar to its object in one respect, and dissimilar in all others, whether it be a painting, a statue, the musical or dramatic representation of a mental mood, etc. Thus the ideas of the external world are images of a regular sequence of natural events, and if they are formed correctly according to the laws of our thinking, and we are able by our actions to translate them back into reality again, the ideas we have are also the *only true* ones for our mental capacity. All others would be false.[7]

According to Helmholtz, the way in which the 'mental symbols' representing reality are generated is not of fundamental importance. What is important is the sequence of 'events,' 'their grammatical relations to one another.'[8] This sequence is what makes thinking about reality possible, because it transforms natural events into a chain of cause and effect that can be, without distortion, submitted to the logical consideration of the intellect. And Helmholtz concluded that perceiving the world happens not in the realm of the senses, but in the mental realm of logic, inductive logic in particular. In Helmholtz's studies, Kantianism (which he inherited from Müller) is mixed somewhat strangely with inductive logic, which he learned from the extremely influential *System of Logic* by John Stuart Mill. In any case, perceptions are definitely removed by Helmholtz from the retina (the so-called 'retinal image' is a standard epitome for visual perception) and placed in the mind.

This position corresponds to the general principles of psychological *empiricism*, which were formulated in virulent opposition to the views of so-called *nativism*. Nativists postulated an innate harmony between mind and matter. Empiricists believed that forms of reality are constructed by the mind. For instance, Helmholtz, as a faithful empiricist, claimed that even an obvious correspondence between the form of a perceived object and the configuration of perceptual traces on the retina is not something natural, but is the result of an intellectual activity called *intuition* that has a direct relation to logic because it also deals with a sequence of 'events':

> The arrangement of the perceptions in the same order as that of the retinal points to which they belong may certainly be regarded as a matter that is settled by intuition [*bildungsgesetzlich festgelegt*]; therefore, whatever is imaged on the two consecutive points a_1 and a_2 will be seen in directions r_1 and r_2 that at all events do not differ very much. If a retinal point c happens to be within a closed curve p, this curve will determine a corresponding closed aggregate of directions (forming the surface of a cone) within which the direction corresponding to the point c will be comprised. We may infer therefore that the *positional* arrangement of the things seen is something settled by intuition.[9]

This stress on the order of points is very similar to a stress on a sequence of events in time. Both constitute logical chains. Perceptions are arrived at logically through a process of induction. Any configuration of stimuli is unconsciously related to a previous experience stored in the memory, which provokes a process of induction that is a necessary condition even for the most basic identification of an object, for naming it. Induction is based on the law of causation, which explains the special necessity of sequels, of the distribution of stimuli into an order which is always an order of antecedence, i.e. of causation.

From this point of view, illusions don't exist. They are simply the signs of a failure of induction, of our misunderstanding of a particular causation. Helmholtz arrived at an important conclusion:

> Finally, the law of causation bears on its face the character of a purely logical law, chiefly because the conclusions derived from it do not concern actual experience, but its interpretation. Hence it cannot be refuted by any possible experience. For if we founder anywhere in applying the law of causation, we do not conclude that it is false, but simply that we do not yet completely understand the complex of causes mutually interacting in the given phenomenon.[10]

For Helmholtz, illusions don't refute the law of causality, they only point to the weakness of our reasoning. The arbitrary relation between sensations and their causes does not, therefore, liberate vision from referentiality, rendering it subjective, as Crary claims. Rather, perception is transferred to the mental realm of logic, of thinking. Sensual, accidental stimuli are formed into a sequence of abstract points through pure logic. Paradoxically, illusions don't demonstrate that perception is subjective. On the contrary, they point to the process of logical induction behind vision in general. This conceptualization of vision is much closer to a Cartesian one than Crary acknowledges. In both, vision ultimately takes place in our mind and not our senses.

From the first third of the nineteenth century, induction was an accredited method of scientific investigation. One of the most influential advocates of this method, John W. Herschel, denied any possibility of illusion, or even an aberration of the senses:

> ... though we are never deceived in the sensible impression made by external objects on us, yet in forming our judgments of them we are greatly at the mercy of circumstances, which either modify the impression actually received, or combine them with adjuncts which have become habitually associated with different judgments.[11]

Many years later, William James, who criticized the understanding of perceptions in terms of unconscious reasoning, subscribed to Herschel's opinion:

> ... in every illusion what is false is what is inferred, not what is immediately given ... The so-called 'fallacy of the senses,' of which the ancient sceptics made so much account, is not fallacy of the senses proper, but rather of the intellect, which interprets wrongly what the senses give.[12]

As illusions were gradually separated form sensation and were transformed into a product of the intellect, they lost their sensual nature. It is difficult to tell to what extent an aberration of logic can be called an illusion at all.

John Stuart Mill, who relied heavily on Herschel's work in his *System of Logic*, was a key figure in the process of reinterpreting optical illusions. He was

particularly preoccupied with the elucidation of those situations with a 'plurality of causes and the intermixture of effects' described by Müller.[13] His solution served as a model for Helmholtz, who several times presented Mill's *Logic* as a key to the problems of visual perception.

There is in Mill's book an interesting discussion concerning logic and vision. Mill reflects on Dr. Whewell's presentation of the way induction was used by Kepler in his discovery of an elliptic form of planetary orbit. According to Mill, 'Kepler did not *put* what he had conceived into facts, but *saw* it in them.'[14] And he adds: 'The ellipse was in the facts before Kepler recognized it; just as the island was an island before it had been sailed around.'[15]

Here, vision is described as an illumination. It was Peirce who later corrected Mill:

> Mill denies that there was any reasoning in Kepler's procedure. He says it is merely a description of facts. He seems to imagine that Kepler had all the places of Mars in space given him by Tycho's observations; and that all he did was to generalize and so obtain a general expression of them. Even had that been all, it would certainly have been inference.[16]

In Mill's illumination, the visualization of an abstraction happens so quickly that it transcends logical inference. However, induction is at work behind it. First of all, there is the logical inference that allows one to conceive of all the points in space through which the planet has to pass. Second, by induction, and induction only, the final visualization of the trajectory as an ellipse takes place:

> If for instance, the planet left behind it in space a visible track, and if the observer were in a fixed position at such a distance from the plane of the orbit as would enable him to see the whole of it at once, he would see it to be an ellipse; and if gifted with appropriate instruments and powers of locomotion ... he could see all parts in succession, but not all of them at once, he might be able, by piecing together his successive observations, to discover both that it was an ellipse and that the planet moved in it.[17]

It is highly symptomatic that Mill emphasizes succession rather than simultaneity,[18] obviously anticipating Helmholtz and going even further. Vision itself is produced by the accumulation of points in succession, i.e. by an operation of induction. The visual illusion of movement, the illusion of the geometrical shape of an orbit, is literally produced by logic.

Logic is not simply responsible for visual illusions. It allows one to see what is, by definition, invisible. It is an instrument for visualizing the invisible comparable to a microscope, but an instrument whose epistemological power is

greater than that of a microscope. A particular use of logic is the foundation of the superhuman potential of technological vision itself.

One of the most spectacular manifestations of this epistemological potential is an *inductive optical illusion* that can be found in Darwin's *The Origin of Species*. It is well known that Darwin was deeply indebted to empiricist methodology, and in tracing the evolution of species, he worked in the way attributed by Mill to Kepler. He tried to draw an uninterrupted line of transformation from one species to another. The continuity of this line was crucial because it was the only way to maintain induction. Any break in this continuity was equivalent to a break in causality, i.e. in the logical chain.

Darwin was permanently uniting logic and vision. Logic doesn't work in his case without visualization, which can only be produced by induction. He acknowledges that this methodology can often be misleading, but he cannot avoid it:

> I have found it difficult, when looking at any two species, to avoid picturing to myself forms directly intermediate between them. But this is a wholly false view; we should always look for forms intermediate between each species and a common but unknown progenitor; and the progenitor will generally have differed in some respects from all its modified descendents.[19]

Darwin was conscious of the necessity of replacing the simultaneity of vision by *diachrony*, by a succession of antecedents enabling him to visualize causality. He was convinced that the multiplicity of the innumerable variety of intermediate species existed. He claimed several times that our lack of knowledge of these species was due only to the imperfection of *geological records*. Darwin's eye works much like the cinematic apparatus, creating an illusion of movement (of evolution) on the basis of a logically constructed chain composed from inductively construed intermediate stages (in the development of each species). His is a true inductive cinema, similar to Kepler's in which the imaginary continuity of an elliptic movement is created from inducted points in space.

James Krasner describes Darwin's vision as a presentation of forms 'perceivable in a visual flicker like that which characterizes an empirical illusion.'[20] According to Krasner, Darwin's scientific approach is based on a specific optical illusion stemming from a logical bridging of analogies:

> Darwin's [reader] conceives of it [natural history] as a set of optical illusions – a series of minute variations on visual forms recombined in an inchoate visual field ... Darwin creates a way of representing nature in which the reader's ravished eye images forms extended in neither time or space, but condensed into and blossoming analogically out from the single organic form. This new way of seeing can best be called *evolutionary vision*.[21]

In his discussion of Kepler's method, Mill was moving toward an understanding of logic as an unconscious working of the mind, almost conflating reasoning with empiricist '*perceptual judgments*.' Peirce coined a special term to define this kind of induction based not on experimental checking but on guessing – *abduction* or *retroduction*.[22] The mere understanding of visual impressions depends, according to Peirce, on abduction:

> Looking out my window this lovely spring morning I see an azalea in full bloom. No, no! I do not see that; though that is the only way I can describe what I see. *That* is a proposition, a sentence, a fact; but what I perceive is not a proposition, sentence, fact, but only an image, which I make intelligible in part by means of a statement of fact. This statement is abstract; but what I see is concrete. I perform an abduction when I so much as express in a sentence anything I see.[23]

Thomas Sebeok and Jean Umiker-Sebeok have reminded us of a spectacular case of abduction when Peirce himself intuitively discovered a thief who had stolen his watch while he was traveling on the steamboat Bristol from Boston to New York in 1879. Peirce guessed who the thief was without ever understanding what kind of unconscious induction was at work behind his guess. The authors of the study concerning this impressive feat of abduction conclude:

> Peirce ... was unable to determine on a conscious level which of the waiters of the Fall River boat was guilty. Holding himself 'in as passive and receptive state' as he could during his brief interview with each waiter, it was only when he forced himself to make what appeared to be a blind guess that he realized that in fact the crook had given off some unwitting index and that he himself had perceived this telltale sign in, as he put it, an 'unself-conscious' manner, having made 'a discrimination below the surface of consciousness, and not recognized as a real judgment, yet in very truth a genuine discrimination.'[24]

A universal proposition was finally deduced from a 'perceptual judgment' that took place on a subliminal level.

This story shows that abduction depends on visual clues that are perceived below the threshold of consciousness. Strangely enough, abduction works as a *super-eye*, recording invisible signs and including them in a chain of instantaneous inferences. Abduction always relies on a visualization and is checked by an image induced by it.

It is well known that Sherlock Holmes provides the most perfect example of inductive and abductive thinking. One of the most prominent characteristics of his method is a real compulsion to visualize his clues, or rather to translate one kind of visual clue into a wholly developed, often narrative image. For instance, after the first inspection of the scene of the crime in *A Study in Scarlet*,

having measured 'with the most exact care the distance between marks which were entirely invisible to me,'[25] he produces a detailed description of the criminal:

> The murderer was a man. He was more than six feet high, was in the prime of life, had small feet for his height, wore coarse square-toed boots and smoked a Trichinopoly cigar. He came here with his victim in a four-wheeled cab, which was drawn by a horse with three shoes and one on his fore-leg. In all probability the murderer had a florid face, and the fingernails of his right hand were remarkably long.[26]

Later Holmes explains that he inferred the height of the man from the length of his stride, and so on. However, the main result of this induction is an image. The logic used in this case has meaning only insofar as an image can be artificially created. An optical illusion is the final gratification of the whole process.

The necessary link between induction and vision that was self-evident for several nineteenth century thinkers should be taken into consideration when dealing with early aesthetic theories of that inchoate art of optical illusion – the cinema. Henri Bergson was the first to argue that the cinematic illusion of movement is the result of a logical abduction. According to him, movement is logically induced from the mechanical presentation of immobile images in a way reminiscent of Kepler's logical reconstruction of the movement of Mars.

This *effect of movement* is inseparable from the *effect of life* emphasized by many reviewers of silent movies, and often described as a strange animistic spirit injected into inanimate objects on the screen. Theodor Adorno argued that artworks elaborate their own logic, which is 'derivative of discursive logic and not identical with it.'[27] This 'quasi-logical' distribution of elements in an artwork can produce the effect of 'a language of thing,' an illusion of a language derivative of the overall discursive structure of the artwork: 'Artworks move towards the idea of a language of things only by way of their own language, through the organization of their disparate elements; the more they are syntactically articulated in themselves, the more eloquent they become in all their elements.'[28] Cinema for the first time puts images of things into a syntactic chain that imitates the syntax of inductive reasoning, hence the overwhelming effect of a linguistic animism.

Here are two famous examples of this kind of thinking about cinema from early film theory. The first is Béla Balázs's first and most influential book, *Sichtbare Mensch* (1924), in which Balázs claims that cinema is a language but a language without words. This does not mean, according to Balázs, that cinema does not involve thinking. Paradoxically, the absence of words makes thinking visible, because it annihilates the verbal intermediary between thinking and expression:

> A man of a visual culture replaces by his gestures not the words, as deaf-mutes do in their sign-language. He doesn't think with words, writing with Morse code in the air their syllables. His gestures don't signify any concepts at all, but express immediately his irrational Self on his face and in his movements, and they come from such a layer of the Soul that words are unable to bring to light. Here the spirit becomes visible in bodies without any mediation nor words.[29]

Thinking is made visible, but it is thinking without the strict rules of grammar.[30] It is well known that, for Balázs, this agrammatical language of inanimate things is physiognomical in its essence. In cinema, the whole universe of things acquires a mute language of physiognomic self-expression:

> There [in film] things are not removed and degenerated. In an all-embracing silence, they quickly become equal to men and gain through this equality in animation and significance. Because they speak no less than people they can say so much. This is the mystery of a particular cinematic atmosphere that is beyond any literary means.[31]

The mysticism of such statements is due to a strange reversal of a logic hidden behind the agrammatical speech of things, and grounded in the mechanism of abduction and in the phenomenon of optical illusion produced by this abduction.[32]

Robert Musil was the first to understand that the phenomenon described by Balázs should be analyzed in terms of mental logic. In his review of Balázs's book, Musil warned against taking cinema for a purely immediate visual impression: 'It would be a mistake to want to see in the suddenly glimpsed physiognomy of things simply the surprise induced by the isolated optical experience.'[33] He continued: 'What is this "physiognomic impression," this "symbolic face" of things? First of all, it is certainly something that can be explained within the compass of normal psychology: some kind of emotional tone associated with the process I have characterized as abstraction and splitting.'[34] The mystical element is, Musil is arguing, a byproduct of primary logical operations in the mind. Musil seems to adhere to some of the premises of empiricist psychology when he claims that 'not only our intellect [*Verstand*] but also our senses are "intellectual"... Even in movements we perceive general characteristics ... '[35] The language of things is therefore not irrational. It is located between what Musil calls 'ratioid' and 'nonratioid' realms.

According to Musil, films should avoid the formulaic, repetitive rationality of everyday existence, i.e. the logic of clichés. What is most unbearable in films is trivial expressivity, 'where anger becomes rolling of eyes, virtue is beauty, and the entire soul is a paved avenue of familiar allegories.'[36] This kind of

pseudo-language belongs to the 'ratioid' realm of labels, classifications, and verbosity.

> When we look at a film, it unfolds the whole infinity and inexpressibility possessed by everything that exists – placed under glass, as it were, by the fact that one *sees* it (there are exemplary instances of this in Balázs). In making connections and working out relations among impressions, on the other hand, film is apparently chained more strongly than any other art to the cheapest rationality and platitude. It appears to make the soul more immediately visible, and the thoughts into experience; but in truth the interpretation of each individual gesture is dependent on the wealth of interpretative resources that the spectator brings with him; the comprehensibility of the action increases, the more undifferentiated it is (just as it does in the theater, where this is taken to be especially dramatic). Thus the expressive power increases with the poverty of expression, and the typicality of film is nothing but a coarse indicator of the stereotyped quality of everyday life.[37]

The claim that the most dramatic expressions participate in the cheapest rationality is of special importance. For Musil, only that which is 'unexpressive' and 'invisible' conveys a real meaning, because it transcends the platitude of 'ratioid' repetitiveness and belongs to the unique and untranslatable experience that is called thinking. Paradoxically, from this point of view, the less expressive, the less animated 'things' are, the more eloquent they become. This explains why *silent* film is particularly expressive, why inanimate objects act in a more expressive way than actors themselves.

These arguments call to mind Conan Doyle's *A Study in Scarlet*. The most spectacular clue among those left by the criminal is the word *Rache* (revenge), written with blood on a wall above the corpse of the victim. Holmes dismisses this clue as a fake, 'written by a clumsy imitator who overdid his part.'[38] This is because it belongs to a narrative whose logic is too obvious to evoke an image in a flash of inductive illumination. It is the logic of a clichéd narrative. The logic of illumination should work on a different, subliminal level of almost invisible clues.

Musil describes a very specific aesthetic experience he craved, one with a dynamic, emotional logic: 'at the moment of comprehension there is a mixing together of meaning, perceived sensuous form, and emotional excitement; afterward, the experience is in part conceptually assimilated and fixed, and in part leaves behind a vague, usually unconscious deposit ...'[39] This takes us to our second example from early film theory, Jean Epstein. Epstein, at the beginning of his career, claimed that cinema has nothing to do with logic or any other kind of intellectual reasoning. He relegated films to the realm of the so-called *emotional reflex*,[40] fundamentally irrational in its premises. At the same time, however, he elaborated his own notion of *photogénie* as an almost mysti-

cal increase in the meaning of a cinematic image. A photogenic image, according to him, is not simply one transformed by the camera lens, but it is also purified and abstracted. Thus, a photogenic image belongs to the world of the intellect as well as the world of physical phenomena:

> This is why the cinema is psychic. It offers us a quintessence, a product twice distilled. My eye presents me with an idea of a form; the film stock also contains an idea of a form, an idea established independently of my awareness, an idea without awareness, a latent, secret but marvelous idea; and from the screen I get an idea, my eye's idea extracted from the camera; in other words, so flexible is this algebra, an idea that is the square root of an idea.[41]

This abstracting of an image allows Epstein to explore the subject of cinematic logic that will come to occupy a dominant place in his later film theorizing, as indicated by the titles of several of his articles and book chapters: *Inversion et redressement logiques, La logique, Fonction du temps, L'antilogique du temps renversé, La logique des images, Logique de point de fusion, Logique du fluide, Logique de temps variable*, etc.

In his books starting from 1946 (*L'intelligence d'une machine*), Epstein claims that cinema is not beyond logic but develops its own logic, whose laws are still obscure and mysterious. Epstein calls this logic 'la pensée méchanique' – mechanical thought. This thought is not human, but is produced by the cinematic machine itself. This non-human thought could be considered as 'half thought' – 'la pensée à demie, et pensée selon les règles d'une analyse et d'une synthèse que, sans instrument cinématographique, l'homme est été incapable de mettre en oeuvre.'[42]

According to Epstein, cinema produces thinking because it generates forms of time and space. Time and space, according to Kant, are the *a priori* forms of thinking, thus a machine generating forms of time and space is a thinking machine. But most importantly, time and space bring with them relations of causality:

> Cinema ... presumes a synthesis of two intellectual categories – of expansion and duration. Synthesis almost automatically presupposes a third category, the one of causality. This power to produce different combinations, as mechanical as it is, shows that cinema is more than an instrument of replacement and extension of one or even several senses. By this power, which is one of the fundamental characteristics of all intellectual activities in all living beings, cinema appears as a substitute to or a continuation of an organ that generally serves as a site for a faculty that coordinates perceptions, i.e. of a brain – supposedly a site of intelligence.[43]

Epstein elaborated a category that embodies logical dimensions of space translated into causality:

> Because causality appears to be a co-variant of time, a spatio-temporal continuum appears also as if having a logical character, and the relativity of space and time embraces a logical relativity. Each space has its own logical sense determined by the direction of its movement in time. Causality is a temporal and spatial function that constitutes a fifth variable of a continuum that we are used to think.[44]

The specificity of this new logic is determined by the peculiarity of cinematic temporality. Because the direction of time can be reversed in cinema, an effect can anticipate a cause, etc. Epstein specifically mentions induction as a mode of thinking based on causality that has an obvious temporal dimension: 'it is almost impossible to think a logical series that doesn't include a patent or latent relation of causality, i.e. a necessary order of succession, a temporal value.'[45] Thus, a variation in temporality, i.e. in causality, produces a variation in logic, what Epstein calls an 'anti-logic.' The fundamental logical importance of cinema lies in the fact that it produces a logic with broken uniformity,[46] or reversed causality, and hence opens up to humanity new ways of thinking at the very limits of human imagination. Many times in his writings, Epstein claims that this new logic inaugurates a new epoch in thinking that transcends all epistemological principles elaborated by Descartes and Kant. It is this new logic that makes visible things normally invisible to human eyes.

To illustrate this new logic, one that reverses the usual relations between causes and effects, Epstein cites a dream stimulated by the sound of an alarm clock. This sound generates a whole narrative, in which a dreamer crosses the city, climbs stairs in a building, and finally rings the bell of one of the apartments. This final sound is the same one that originates the dream, and is therefore both its cause and effect at the same time.[47] Epstein claims that in dreams, as in cinema, we are dealing with a different kind of temporality, with exterior and interior times that have different speeds:

> The sound, that was a cause in the exterior time, thanks to a difference in value of two times, became a goal in the interior time. A short delay of perception in a slow time, used for the profit of the imagination in a rapid time, such are the conditions here for a complete reversal of determinism, of a semi-rotation in what can be called a logical space: one end replaced by another, the end changed place with the beginning, an effect with a cause.[48]

Interestingly, the speed of perception mentioned by Epstein, is, according to James, responsible for the vision of an object as such. James argued that our consciousness depends on a certain slowness in the cortical cells. In those cases when an image immediately awakens a preexisting neural path, it remains almost invisible:

> If a region A, then be so connected with another region B that every current which enters A immediately drains off into B, we shall not be very strongly conscious of the sort of object that A can make feel. If B, on the contrary, has no such copious channel of discharge, the excitement will linger there longer ere it diffuses itself elsewhere, and our consciousness of the sort of object that B makes us feel will be strong.[49]

James explained that a vivid sensation of an object depends on 'resistance to the transmission forward of the current.' It is obvious that the reversal of causality and the emergence of an 'anti-logic' are the best way to destroy the pre-existing channels of an associative discharge. Therefore, this new logic is directly linked to a new vision.

The tendency to conceive of cinema and other optical illusions as being the result of logic, mainly induction, is grounded in an emphasis on the temporal dimension of such illusions. Epstein, for instance, often understood cinematic space as the product of a specific temporalization. This kind of thinking overstresses the role of syntax, of narrative linearity, of a succession of events. A counter-tendency grounds optical illusions primarily in the dimension of space: in a system of linear perspective and in the appropriation of a kind of pictorialism by the camera itself. This tendency usually overlooks the temporal dimension of an illusion, and ignores its intellectual background. This tendency is, unfortunately, the only one relatively well explored by historians of cinema.[50]

I would like to present these notes to Annette Michelson as a modest contribution to a field she has so inspiringly explored. Her work is of fundamental importance for rethinking such phenomena as optical illusions and optical toys, not as a part of perception, but as a part of an *intellectual* history, of the history of *thinking*.

Notes

1. Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, N.J.: Princeton University Press, 1979), p. 45.
2. Jonathan Crary, *Techniques of the Observer* (Cambridge, Mass.: MIT Press, 1990), p. 43.
3. Ibid., p. 48.
4. See Sarah Kofman's analysis and her conclusion: 'Because images on the retina are perspectivist, Descartes concludes that there is no resemblance between object and image. It is the mind that sees, and not the eye, and the mind is consciousness

without point of view.' *Camera Obscura of Ideology* (Ithaca, N.Y.: Cornell University Press, 1999), p. 52.
5. Crary, *Techniques of the Observer*, p. 89.
6. Ibid., p. 91.
7. Helmholtz, *Treatise on Psychological Optics*, vol. 3, ed. James P. C. Southhall (New York: Dover, 1962).
8. Ibid., p. 23.
9. Ibid., p. 610.
10. Ibid., p. 33.
11. John F. W. Herschel, *A Preliminary Discourse on the Study of Natural Philosophy* (Chicago: University of Chicago Press, 1987), p. 83.
12. William James, *The Principles of Psychology* (Chicago: Encyclopaedia Britannica, 1952), p. 508.
13. John Stuart Mill, *A System of Logic Ratiocinative and Inductive* (London: Longmans, 1961), pp. 285-99.
14. Ibid., p. 193.
15. Ibid.
16. *Philosophical Writings of Peirce*, ed. Justus Buchler (New York: Dover, 1955), p. 154.
17. Mill, *A System of Logic*, pp. 193-94.
18. Simultaneity is typical for a relatively loose constellation of circumstances defined as *association*, which may be causal or casual. *Induction* is exclusively causal and is based on a strict succession. Induction supersedes association and creates greater accuracy of sequences. See Oskar Alfred Kubitz, *Development of John Stuart Mill's System of Logic* (Urbana: University of Illinois Press, 1932), pp. 184-87.
19. Charles Darwin, *The Origin of the Species* (New York: New American Library, 1958), p. 288.
20. James Krasner, *The Entangled Eye: Visual Illusion and the Representation of Nature in Post-Darwinian Narrative* (New York: Oxford University Press, 1992), p. 54.
21. Ibid., p. 55.
22. *Philosophical Writings of Peirce*, pp. 150-56.
23. Cited in Thomas A. Sebeok and Jean Umiker-Sebeok, '"You Know My Method": A Juxtaposition of Charles S. Peirce and Sherlock Holmes,' in *The Sign of Three: Dupin, Holmes, Peirce*, ed. Umberto Eco and Thomas A. Sebeok (Bloomington: Indiana University Press, 1983), p. 16.
24. Ibid., p. 18.
25. Sir Arthur Conan Doyle, *The Complete Sherlock Holmes*, vol. 1 (Garden City, Doubleday, n.d.), p. 31.
26. Ibid., p. 32.
27. Theodor A. Adorno, *Aesthetic Theory*, ed. Robert Hullot-Kentor (Minneapolis: University of Minnesota Press, 1997), p. 138.
28. Ibid., p. 140.
29. Béla Balázs, *Schriften zum Film*, Erster Band (Berlin: Henschelverlag, 1982), S. 52 ['Der Mensch der visuellen Kultur ersetzt mit seinem Gebärden nicht Worte wie etwa die Taubstummen mit ihrer Zeichensprache. Er denkt keine Worte, deren Silben er mit Morsezeichen in die Luft schreibt. Seine Gebärden bedeuten überhaupt keine Begriffe, wordssondern unmittelbar sein irrationelles Selbst, und was sich auf seinem Gesicht und in seinem Bewegungen ausdrückt, kommt von

einer Schichte der Seele, die Worte niemals ans Licht fördern können. Hier wird der Geist unmittelbar zum Körper, wortlos, sichtbar.'].

30. About the agrammaticality of Balázs's 'silent language,' see O. V. Aronson, 'Mimika I grammatika,' *Kinovedcheskie zapiski* 25 (1995), pp. 150-56.
31. Béla Balázs, *Schriften zum Film*, S. 66 ['Dort sind die Dinge (im Film) nicht so zurückgesetzt und degradiert. *In der gemeinsamen Stummheit* werden sie mit dem Menschen fast homogen und gewinnen dadurch an Lebendigkeit und Bedeutung. Weil sie nicht weniger sprechen als die Menschen, darum sagen sie gerade so viel. Das ist das Rätsel jener besonderen Filmatmosphäre, die jenseits jeder literarischen Möglichkeiten liegt.'].
32. On Balázs and mysticism, see V. I. Mikhalkovich, 'Balash kak mistik,' *Kinovedcheskie zapiski* 25 (1995), pp. 139-47.
33. Robert Musil, *Precision and Soul*, ed. Burton Pike and David S. Luft (Chicago: University of Chicago Press, 1990), p. 200.
34. Ibid., p. 198.
35. Ibid., p. 201.
36. Ibid., p. 203.
37. Ibid., p. 203.
38. Doyle, *The Complete Sherlock Holmes*, vol. 1, p. 33.
39. Musil, *Precision and Soul*, p. 204.
40. On Epstein's early position, see Mikhail Iampolski, *Vidimyj mir* (Moscow: Kinovedcheskie zapiski, 1993), pp. 68-73.
41. Jean Epstein, 'The Senses I (b),' in *French Film Theory and Criticism, A History/Anthology, 1907-1939*, vol. 1, ed. Richard Abel (Princeton, N.J.: Princeton University Press, 1988), p. 244.
42. Jean Epstein, *Ecrits sur le cinéma*, vol. 1 (Paris: Seghers, 1974), p. 282.
43. Ibid., pp. 309-10 ['Le cinématographe . . . suppose la synthèse de deux catégories intellectuelles, celle de l'étendue et celle de la durée; synthèse dans laquelle apparaît presque automatiquement une troisième catégorie, celle de la causalité. Pour ce pouvoir d'effectuer des combinaisons diverses, pour purement mécanique qu'il soit, le cinématographe se montre être plus que l'instrument de remplacement ou d'extension d'un ou même de plusieurs organes des sens; par ce pouvoir qui est l'une de caractéristique fondamentales de toute activité intellectuelle chez les êtres vivants, le cinématographe apparaît comme un succédané, une annexe de l'organe où généralement on situe la faculté qui coordonne les perceptions, c'est-à-dire du cerveau, principale siège supposé de l'intelligence.'].
44. Ibid., p. 318 ['Puisque la causalité se révèle ainsi être un covariante du temps, le continu espace-temps apparaît comme possédant aussi un caractère logique, et la relativité de l'espace et du temps embrasse la relativité de la logique. Tout espace possède son sens logique propre, déterminé par la direction de son mouvement dans le temps. La causalité est une fonction temporelle et spatiale, qui constitue la cinquième variable du continu que nous sommes le plus habitués à concevoir.'].
45. Ibid., p. 321 ['Il est quasi impossible de concevoir une série logique, qui ne contienne, patent ou latent, un rapport de causalité, c'est-à-dire un ordre de sucession nécessaire, une valeur temporelle.'].

46. Classical induction, in J. S. Mill for instance, presupposes a uniformity of phenomena. Nature can be a field of scientific induction because it is seen as uniform.
47. Freud discussed the so-called 'alarm-clock dreams' and arrived at the conclusion that the reversal of temporality in such cases is due to the arousal by the sound of memory-images. Sigmund Freud, *The Interpretation of Dreams* (New York: Avon, 1965), pp. 59-63.
48. Jean Epstein, *Ecrits sur le cinéma*, p. 302-3 ['Le son qui était cause dans le temps extérieur, est devenu fin dans le temps intérieur, grâce à la différence de valeur de ces deux temps. Bref retard de la perception dans un temps lent, longuement mis à profit par l'imagination dans un temps précipité, telles sont les conditions, ici, d'un renversement complet de determinisme, d'une semi-rotation dans ce qu'on pourrait appeler l'espace logique: bout pour bout, fin pour commencement, effet pour cause.'].
49. William James, *The Principles of Psychology*, p. 520.
50. Eisenstein was among the rare theoreticians who combined these two approaches. His intellectual montage is based on logic and succession, but can't be reduced to a pure succession. It is a montage of plastic 'compositions,' of wholly elaborated pictorial spaces. In his theory of vertical montage, Eisenstein makes a radical but questionable attempt to bring the spatial and temporal dimensions of cinema together.

Narcissistic Machines and Erotic Prostheses

Allen S. Weiss

Car nos paroles sont guignols.
Paul Valéry, *Cahiers*

The transformation of the theological notion of demonic possession into scientific concepts of hysteria and psychosis is contemporaneous with the epistemological shifts of early modernism. The emblematic, and historically original, case occurred in Morzine between the years 1857 and 1873, when nearly half of the women (as well as several men) of this Savoyard town succumbed to an epidemic of what they took to be demonic possession, manifesting most of its traditional symptoms: screams, curses, spasms, contortions, convulsions, clairvoyance, superhuman agility, speaking in tongues, blasphemy, and prophesy.[1] Morzine was in the grips of a historical crisis caused by a radical demographic shift. As this poor region was newly annexed to France, the majority of the male population left to find work in Paris, leaving the women – for the most part unlettered and without public voice – of this relatively isolated mountain community to create a culture unto themselves, still firmly anchored within the limits of traditional religious consciousness. This psychological implosion brought about a crisis of collective demonic possession, which in fact motivated the most extreme possibilities of language and gesture to express the pains and desires inherent in a culture on the way to its final dissolution, thus revealing the inner contradictions of a failing social and historic order.

This event would become a *cause célèbre* in France: Morzine found itself torn between a modern church whose system of increasingly rationalized belief left little room for either miracles or traditional culture (the demands of the possessed for exorcism were met with an insistence that faith alone should suffice), and the scientific rationalism of the state (which was thoroughly embarrassed by the event and responded with force). Caught in the double bind of history and theology, these women responded in the tongues of angels and the bodies of devils. Finally, the state called in the military, political, and medical establishments to crush the 'rebellion.' The possessed were exiled to hospitals in neighboring cities, and all manifestations of the possession were outlawed.

By May 1861, the town came under minute scrutiny: not only did all cases of possession have to be reported to the authorities, but also everybody was obliged to refer to the ailment as *hystéro-démonopathique*, thus indicating the psychological, and not theological, origin of the events. The collective memories, beliefs, and desires of this community were reinterpreted in terms of individual, subjective passions, and the manifestations of an oral religious tradition were transformed into psychosomatic symptoms. In these years, the ancient cultural identity of Morzine was shattered, and, for the first time in France, medical authorities triumphed over the Church in a case of demonic possession, establishing the paradigm that still regulates such matters.

The tale may be told by a chronologically ordered declension of the contemporary terms used to analyze the event: *possession démoniaque, démonomanie, hystéro-démonopathie épidémique, hystérie*. From demonomania to erotomania, from faith to madness, the devil's work would ultimately be rationalized and thus effaced by the century's science, culminating in Charcot's iconographic classification of the gestures of female hysteria at La Salpetrière and Freud's metapsychological analysis of the unconscious machinations behind hysteric symptoms. It is in the context of this historic transformation that the traditional models of demon and muse must be grasped in their new, contemporary manifestations. Those deliria, which for centuries had been marked as prophecies or blasphemies, were transformed into symptoms within nineteenth century epistemology, and then taken up as artistic forms in twentieth century aesthetics.

The declension of theology into *mathesis* and of *poesis* into psychology describes not only the beginning of the breakdown of ontotheology but also the multiplication of representational forms, augmented by the delirious possibilities of recording technology, which inaugurated the radical heterogeneity of discursive and poetic systems.[2] For soon after the events at Morzine, human bodies were no longer necessary as the conduit for disincarnate voices, since machines began to be capable of the same simulations.

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Jules Verne's *Le château des Carpathes* (*The Chateau in the Carpathians*, 1892) is emblematic of the transformation of nineteenth century scientism into romantic phantasms. The tale centers on the unbounded love of two men for a woman, the opera singer La Stilla. One is the rich, aristocratic Franz de Telek, who fell in love with La Stilla the very first day he heard her sing at the opera of Naples; the other is the melomaniacal Baron Rodolphe de Gortz, who assidu-

ously attended every one of her performances and for whom 'it seemed that the voice of the singer had become as necessary as the air he breathed.'[3] Though Gortz never attempted to meet La Stilla, he not only possessed the most beautiful portrait of her, but he also found a means to surreptitiously possess her voice.

Thus at each concert, two very different passions intersected in a narrative split that marked the breakdown of romantic interiorization and indicated the directions soon to be taken by the burgeoning discipline of the metapsychology of love: one passion was directed towards the woman, the other towards her represented roles; one towards her body, the other towards her voice. La Stilla, brought to a state of terrible nervous tension by the disquieting presence of Gortz and having fallen in love with Telek, decides to give up her career. From that moment on, Gortz – who it was rumored had attempted suicide at the thought of losing access to La Stilla's performances – was always accompanied by the strange, diabolical inventor Orfanik, who, as it turns out, had attended the concerts with a sophisticated sound recording device in order to capture her voice for his master.

La Stilla's last concert took place in San Carlo, where she played the role of Angelica in Arconati's *Orlando*. Gortz and Orfanik, as well as Telek, were of course in attendance:

> She came to the dramatic scene where the heroine of *Orlando* dies. Never had the admirable music of Arconati appeared more penetrating, never had La Stilla interpreted it with more passionate intonations. Her entire soul seemed to be distilled through her lips ... And yet, one would have said that this voice, at moments as if rent apart, was going to shatter, this voice which was no longer to be heard! (pp. 148-49)

The feeling that this voice would shatter and disappear, never to be heard again, serves as a doubly realized premonition that will uncannily and ironically drive the narrative, inciting both mourning and madness and culminating in a denouement of morbid repetition constituting a new allegory of art. At the very instant of the operatic moment of truth, Baron de Gortz – the object of La Stilla's anguish – showed himself, eyes aflame and pale with fright:

> La Stilla let herself be carried along by the great ardor of the rousing stretto of the final song ... She had just sung again of the most sublime feelings:
> *Innamorata, mio cuore tremante,*
> *Voglio morire ...*
> Suddenly, she stopped ... The face of the Baron terrified her ... An inexplicable horror paralyzed her ... She quickly brought her hand to her mouth, which was reddened with blood ... She staggered ... she fell ... (p. 149)

It was not the soul that was distilled or sublimated through the lips but rather the body in its bloody essence. La Stilla was dead. In a moment of great pathos, life imitated art. Yet this doubling – homologous with Poe's *The Oval Portrait* – serves not only as a literary device of mythical and psychological narrative. For here, human death as a simulacrum of operatic demise serves as a prefiguration for the further narrative doubling to come, that of La Stilla's simulacral reapparition. *Le château des Carpathes* is an archetypically modernist tale, where myth and art give way to scientific reproduction, and where the lifeless simulacrum holds as much sway over desire as does the veritable living body.

Soon afterwards, Telek, to forget his bereavement, traveled to the Carpathian mountains where, in his room at the local inn, he all of a sudden heard the singing voice of La Stilla. This spurred him to search for his beloved, and as he arrived at the chateau that dominated the hills outside the village, he saw La Stilla on the ramparts summoning him. Little did he know that this was a trap executed by Gortz and Orfanik to lure Telek into the chateau and murder him, since Gortz blamed him for the death of La Stilla and wanted revenge. And it is precisely here – at the intersection of two very different loves and two very different modes of nostalgia – that the modern scientific spirit intersected with romantic narrative. For the apparition of La Stilla's voice was a lure created by sending her recorded voice through a telephonic system into Telek's room (the same telephonic line that was used to spy on events taking place in the inn), and the apparition on the ramparts was a sophisticated form of magic lantern. Indeed, Orfanik's inventions, which were also used to scare the townfolk away from the chateau, constitute a compendium of contemporary scientific illusionism:

> ... the bell chiming in the bell-tower, projections of intense flames, mixtures of marine salt, which gave everything a spectral appearance, formidable sirens of compressed air that gave off horrible roars, photographic silhouettes of monsters projected by means of powerful spotlights, metal plates placed between the weeds in the moat connected to batteries. [4] (p. 217)

Telek penetrates into the depths of the chateau, only to find himself trapped. After many trials and tribulations – Telek thinks himself lost although he is only a few doors away from his beloved La Stilla and is brought to the point of madness, believing he cannot save her from the monstrous Gortz – Telek finally manages to escape his enclosure and finds Gortz alone in his chamber. Knife in hand, Telek approaches:

> Suddenly La Stilla appeared.
> Franz let his knife fall on the carpet.
> La Stilla stood on a platform, in full light, her hair undone, her arms extended, admirably beautiful in Angelica's white costume from *Orlando*, just as she had appeared

> on the ramparts of the bourg. Her eyes, fixed on the young count, penetrated to the depths of his soul ... La Stilla had just begun to sing. Without leaving his armchair, the Baron de Gortz leaned forward towards her. In a paroxysm of ecstasy, the dilettante breathed in this voice like perfume, drinking it down like a divine liquor. Just as he previously assisted at the performances in Italian theaters, so was he now in the middle of this room as in an infinite solitude, at the very summit of this dungeon dominating the transylvanian countryside! (p. 228)

Telek was spellbound by her voice; it was as if 'some miracle had resurrected her before his eyes' (p. 229). And once again they heard the words of the opera's finale:

> *Innamorata, mio cuore tremante,*
> *Voglio morire ...*

The convention of expressing narrative complications through the means of iconic exchanges and dissimulations of the gaze receives its ultimate morbid extrapolation: here, it is the simulated gaze of the dead that transfixes the beloved. This function is furthermore accomplished through the expulsions, extinctions, exchanges, and metaphorizations of the simulated, breathed, and finally silenced voice. 'Franz no longer breathed ... His entire life was attached to that song ...' (p. 229). Like the simulated voice of La Stilla, Franz was breathless. Was this vision one of morbid wish fulfillment or compulsive repetition, hysteria or psychotic delirium? In fact, the notable shallowness of psychological development in this narrative, with its highly stereotyped emotional characterizations and degraded romantic effects, is fully appropriate to the tale's moralizing themes: the powers of love and the futility of science in the face of death. Or, more precisely, such is the case if one identifies with Telek, as is implied by the narrative structure. Yet to read Gortz as an anti-hero in the name of science would establish a very different literary genealogy for the book. And to imagine the tale from the point of view of La Stilla (and her simulacrum) would place the story at the very origin of a new sort of drama.

Telek expected that, with the song's last words, La Stilla would again fall dead, as she did in San Carlo. But as the last note resounded, and she screamed forth as before, she didn't fall but remained standing, immobile, with an adoring gaze: 'a gaze that cast all the tenderness of her heart at the young count' (p. 230). Telek, thinking that the living La Stilla stood before him, was in fact ironically beckoned by death, which took an as-of-yet-unconceived form. Ontologically, it is as if she were a new sort of statue, a statue of light (only to be realized decades later through holography). At that moment, Gortz noticed Telek and realized that Telek didn't understand that this was but mere illusion. In a gesture of terrible cruelty, even more vengeful than the fate he had originally planned for his rival, Gortz grabbed the knife and plunged it – not into Telek's

but into the singer's heart – before Telek's horrified very eyes. In this spontaneous simulation of murder, La Stilla seemed to disappear into a thousand shards of shattered glass, and Telek lost consciousness. In this fabulous metaphor of a new form of *vanitas*, the heart is revealed as nothing but air and light, and both life and love are deemed illusions fragile as glass. Each epoch proffers different signs of human vanity and the fugacity of existence: at the end of the nineteenth century, recording technology made possible, through increasingly perfect reproduction, the apparent simultaneity of age and youth, life and death – transmogrifying both the work of mourning and the cult of relics, and offering new modes of fetishism and perversion. Telek's rescuers begin to fire upon the chateau and as the phonograph that held La Stilla's voice is hit and shattered, Gortz screams out, 'Her voice ... her voice ... Her soul, the soul of La Stilla ... It is broken ... broken ... broken...' (p. 232). Gortz is killed and the chateau destroyed, but not before Telek is saved – though the course of events drove him to madness. Only with time was he to regain his sanity, the cure aided, as might be expected, through repeated listening to Orfanik's recordings of La Stilla, which helped him work through the trauma by means of the constant rememoration of events.

The ontological particularity of this final apparition of La Stilla is that she is not merely a simulacrum or a representation, but in fact the *simulacrum of a representation,* for what is reproduced in Gortz's chateau is a projection of a segment of an opera. In a horrifying allegory of the new relations between art and science, this conflation of modes of reproduction entails a rift in modalities of desire: while Telek loves the woman, Gortz is impassioned by the simulacrum. Given the circumstances of her ontological duplicity (all the while marked by her double disappearance), the logic of this new desire – in ironic multiplication and mimesis of the romantic possibilities of the resolution of such a crisis – is that the former should go mad, and the latter should die. Modernism begins to find its erotic model of an anti-hero thanks to the creation of a non-heroine.

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In *Mémoires de l'ombre et du son* (*Memories of Shadow and Sound*), Jacques Perriault describes the profound relations between the origins of sound recording and the compensatory mechanisms of prosthetics. Consider that before beginning his medical studies, Charles Cros worked from 1860-63 as a coach at the Institute for Deaf-Mutes on the rue Saint-Jacques in Paris. In one of the books on the education of deaf-mutes that Cros read during that time, De Gerundo's *De l'éducation des sourds-muets de naissance,* may be read the polemi-

cal but revelatory sentence: 'there is no question of making deaf-mutes into speaking automatons.' The explanation followed that, 'The study of the mechanisms of speech, obtained through anatomy with the aid of wax preparations, engravings, and speaking machines, will be very useful in guiding the operations of the teacher of deaf-mutes; but it is not necessary for the deaf-mute himself; it will be of very little use to him.'[5] In this early statement of a possible role of sound recording (contemporaneous with Nadar's 1856 prognostication of an 'acoustic daguerrotype' as a parallel to his own development of photographic documentation), the connection is made between prosthesis, sound recording, and automatons – a combination that will inform both the science and the science-fiction of the late nineteenth century. Furthermore, the inventor of the telephone, Alexander Graham Bell, was from a family that was also involved in teaching deaf-mutes; he opened up a school to that end in Boston in 1872 and become a professor of vocal physiology a few years later. This passion was more than vocational, for in 1875 he was to marry one of his deaf-mute pupils.

Edison himself was nearly deaf, as the result of a childhood beating; this deafness not only served as a motivation for the invention of the phonograph, but its limitations also informed the style of music recorded by Edison's company, which was responsible for recording more than twelve hundred singers by 1913. Only through sound reproduction could there be a satisfactory solution to the apparent paradox of an ardent opera-lover who was also deaf! For Edison claimed to be able to hear anything whatsoever by means of the phonograph, which was the prosthesis that permitted him to hear *bel canto*, otherwise inaudible to him. Edison, in great part because of his deafness, could not stand complex musical textures and harmonies (and even wanted to know whether a tune could be written solely utilizing thirds and sixths). He disliked the violin because it hurt his ears and especially abhorred octaves played on this instrument; he found tremolo to be a defect of the human voice, preferring a voice without vibrato (since it emerged more clearly on recordings); he preferred low tones to high ones and despised extreme dynamics; he thought that chromatic runs distracted from the melodic line; and, in his scientific perfectionism, he detested 'extraneous' noises, such as the squeaking of flute keys, the thumping of piano felts, the turning of pages, guttural vocal sounds, and especially breathing! This led him to claim, with typical scientist's hubris, that, 'When we began to record grand opera, we thought that the difficulties that impaired the resultant recordings came from the phonograph. We now know that these difficulties came from the voice.'[6] Enthralled as he was by the phonograph and dependant as he was upon it, Edison's musical preferences were a function of recording as prosthesis: the veritable limits of his aesthetics were

marked by the imperfections of both his ear and his own recording and playback apparatuses.[7]

The novel historical and metaphysical implications of this invention were twofold: on the one hand, song was made prosthetically accessible to the deaf; on the other, voice and song could be preserved for posterity, transcending the death of the singer. But this innovation did not stop at the point of mere simulacra, since the scientism of the day also engendered a myth of perfectibility, well beyond the range of human possibilities. In both the scientific practice and the phantasmatic musings of the epoch, several major modalities and goals of reproductive technology arose: (1) the perfectibility of humans through prosthetic devices; (2) the perfectibility of simulacra through recording; (3) the hybridization of humans and machines; (4) the creation of totally non-human automatons, whether in human or extra-human form. Scientists imagined that technology would henceforth compensate for catastrophes of the body, and poets fantasized that it would also compensate for cataclysms of the soul, most specifically to counter the nostalgic wounds of lost, unrequited desire. For if a prosthesis could be created for a lost limb or a lost voice, then why not also for an impossible passion or a lost love!?

Hence the origin of what would come to be known, in the felicitous term coined at mid-twentieth century by Michel Carrouges, as *machines célibataires*, bachelor machines.[8] The definition of the 'bachelor machine' most germane to the present topic is given by Carrouges: 'A bachelor machine is a fantastic image that transforms love into a mechanics of death.'[9] Rather than accentuate the incommensurable nostalgic distance between death and desire exemplified in Romanticism – a distance already lessened, though not eliminated, in Symbolism – the ultra-modernist bachelor machines conflate Eros and Thanatos, suppress nostalgia, collapse Time and Eternity, and confuse origins and telos, so as to inaugurate an epoch where reproductive technologies inform sexual mechanics. This is, as the present study attempts to reveal, precisely one of the hidden roles of the phonograph at the origins of sound recording, the destiny of which is intimately bound to transformations in the poetic forms of nostalgic lyricism and romantic morbidity. Such transformations describe the solipsistic circuit of an onanistic sexuality (incorporating all possible dualisms and perversions); a delirious metaphysics (conflating all possible ontological contradictions); a useless simulation (where every machine is essentially infernal); and a morbid functionalism (where time, solitude, and death are synonymous). Jean Clair schematizes the major characteristics of the bachelor machine, the manifestations of which are legion in the annals of modernism: antigravitation, chronos, cycles, electrification, love-making machines, art-making machines, perpetual motion, artificial life, and voyeurism.[10]

The bachelor machine is characterized by a state of total autoeroticism raised to a metaphysical (indeed, often cosmic) dimension. Thus the metapsychological description of this sub-genre is intricately linked to Freud's discovery of narcissism, which was necessitated by his first major analysis of psychosis (paranoid schizophrenia), the study of Daniel Paul Schreber.[11] Schreber's *Memoirs of My Nervous Illness* details such an alternate world, where obscure and evil gods controlled Schreber's mind and body, and where anxiety would give rise to the most grandiloquent megalomania leading to apocalyptic scenarios. The variegated psychoanalytic history of this case reveals how modern forms of psychosis incorporated elements of contemporary technology, both mechanical and electric, into pathological phantasms. The transformation of lyrical forms by psychopathological symptoms multiplied narrative possibilities in the context of both early modernist technophilia and technophobia, later to diverge even further within the genres of science fiction, Art Brut, and virtual reality (further complicated by epistemological question of 'other worlds' in fiction and philosophy). This problematic relationship is analyzed by Mark Roberts in 'Schreber as Machine, Technophobe, and Virtualist': 'Plugged into madness, rendered into a machine, strapped into restraints, probed by devices, subjected to the psycho- and electromechanical theories of the time, Schreber was naturally both intensely aware of the fact that he had become a machine and horrified that he was one.'[12]

In psychosis (which Freud for a time referred to as 'narcissistic neurosis'), there is a nearly total decathexis of libido from external objects, with a subsequent recathexis in the ego, well beyond the normal amount of narcissistic libido inherent in the quotidian energetic dynamic of the psychic mechanism. The psychotic implosion of libido entails both the total impoverishment or destruction of the external world and the consequent megalomaniacal constitution of the ego simultaneously as God and martyr in a sort of hyperbolic idealism raised to a level of cosmic delusion. Here, the other exists only as a figment, or fragment, of the imagination; eroticism is reduced to masochistic autosuggestion. The body becomes not a semiotic system to symbolize the world through sublimation but rather a desublimated matrix where the world, and God, is encrusted upon and within the body like a mass of parasites. Here, as Antonin Artaud will insist, the exorcism of God from the unconscious is the prolegomenon to any possible cure; whence the Nietzschean 'modernity' of such forms of psychotic struggle often staged, as in Schreber and Artaud, as a sort of interiorized passion play where the identities of all the participants – God and Devil, man and woman, living and dead – are one with that of the psychotic. Yet it is not the psychotics' God, but rather their delirious machines that are germane to the present study.

The psychoanalytic *locus classicus* of such machines is Victor Tausk's 'On the Origin of the Influencing Machine in Schizophrenia,' where these mechanisms are described:

> The schizophrenic influencing machine is a machine of mystical nature. The patients are able to give only vague hints of its construction. It consists of boxes, cranks, levers, wheels, buttons, wires, batteries and the like. Patients endeavor to discover the construction of the apparatus by means of their own technical knowledge, and it appears that with the progressive popularization of the sciences, all the forces known to technology are utilized to explain the functioning of the apparatus. All the discoveries of mankind, however, are regarded as inadequate to explain the marvelous powers of this machine, by which the patients feel themselves persecuted.[13]

The major characteristics of these mechanisms, acting in the form of a 'suggestion apparatus,' are to make the patients see pictures, usually in the form of a magic lantern or cinematograph; to produce corporeal motor phenomena (often of a sexual nature); to create various pathological occurrences; and to either produce or eliminate thoughts and feelings – all by means of air currents, electricity, magnetism or X-rays.[14] Psychoanalytic metapsychology interprets the appearance of these machines in psychosis as a pathological projection serving as a defense against narcissistic regression of libido; the sense of estrangement is due to a turning away of libido from forbidden organs or objects. 'The feeling of strangeness is a defense against libidinal cathexis, no matter whether it concerns objects of the outer world, one's own body or its parts.'[15] Thus the influencing machine is a condensation or metaphorization of the pathologically cathected organ or body as it is exteriorized and objectified as a phantasmatic projection in which 'the important distinction is not between the sexes but between narcissistic and object libido, and every object demanding a transfer of libido is regarded as hostile, irrespective of sex.'[16] Indeed, the projected machine often represents the psychotic body *as* phallus, a radical synecdoche that simultaneously evokes the ancient myth of Priapus and institutes a contemporary model of Eros at the very limits of metaphorization and narrative.

Hence the homology between the 'influencing machine' and the 'bachelor machine,' following Carrouges' already cited definition: 'A bachelor machine is a fantastic image that transforms love into a mechanics of death.' This theoretic homology is confirmed by the sole case history which Tausk proposes as evidence in his study, that of Natalija A. This patient – deaf for many years, and thus able to communicate only by writing – explains that she was long under the influence of an electrical machine made in Berlin (shades of Doctor Mabuse). This diabolical apparatus, whose inner organs consisted of electric batteries, *had the form of the patient's own body*, though she could not see its head

and was not sure whether it bore her own face – a typical manifestation of disquieting, diabolical doubles. The handlers of the machine control nearly her entire existence, and *whatever happens to the machine happens to her*. It is certainly of interest to note – in relation to the problematic case of Eros and Thanatos in both Villiers' *L'Eve future* and Carrouges' *Les machines célibataires* – that the torso of Natalija's influencing machine bears the shape of a coffin, and is lined with silk or velvet.[17] Might not the interiorizations of psychosis, with all its defensive projections, offer parallels more than just literary with the interiorizing aspects of deafness and the consequent desire for compensatory prosthesis? Might not the desire for silence as respite from the torturing voices heard by psychotics somehow exist in a strange metaphysical complicity with the absolute silence experienced by the deaf and the totally anguishing silence of death?

Suggestion apparatuses, anxiety producing machines, influencing machines, bachelor machines, infernal machines: the solipsistic circuit of desire prefigured in the myths and tales surrounding the early history of sound recording inaugurates a central stylistic figure of modernist and postmodernist aesthetics and poetics. Here, reproductive technologies create the paradoxical ontological conditions of simultaneously producing a duplication of and a gap within the real; a perpetuation and transformation of the past; a simulacrum of and prosthesis for the body. Henceforth, reproduction and creativity are no longer distinguishable, temporality can no longer be conceived of as linear and univocal, and human perception is inextricably intertwined with artificial prosthetics.

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In 'La machine à gloire' ('The Glory Machine'), Villiers de l'Isle-Adam reminds us that, 'Lest we not forget, the spirit of the century is in machines.'[18] Prefiguring the *anxiety producing machines* typical of contemporary manifestations of paranoia, the reconstitution of the theater as a *glory producing machine* served as a prelude to Villiers' great myth of the erotic apparatus, *L'Eve future*. In 'La machine à gloire,' he explains that, 'Twenty androids straight out of Edison's factory, with praiseworthy faces, discreet and shrewd smiles, and decorations in their buttonholes, are attached to the machine.'[19] As the 'glory machine' is a theater turned into a machine that acts directly on the spectators' consciousness, thus making the play superfluous, the purpose of the androids is to suggest the proper attitudes to the other, human, spectators. If by chance the humans wish to actually pay attention to the play being represented, the

androids can forestall this eventuality by screaming 'Fire!,' thus raising a potentially murderous ruckus to drown out the spectacle. These androids – simulacral and murderous, illusionistic and attractive, ironic and serious – shall be our guide to a certain *fin-de-siècle* literary production and phantasmatic eroticism.

Villiers' *L'Eve future* may well serve as the emblem of this epochal shift.[20] This is the tale of an inventor, the already mythical Edison, who creates an android woman for his friend Lord Ewald, who is enthralled by the physical aspects of his beloved, the singer Miss Alicia, but is thoroughly disappointed by her soul. Alicia is characterized as a 'bourgeois Goddess,' with but a single defect, albeit a major one: 'The sole misfortune afflicting Miss Alicia is reason. If she were deprived of all reason, I could understand her. The marble *Venus*, after all, *has nothing to do with reason*' (p. 41). In the abstract, this might be a metaphor for the difference between art and life (*The Oval Portrait* inverted, *Pygmalion* revised), or else a pastiche of the statue that serves the epistemological allegory of Condillac's *Traité des sensations*.[21] Hence the desire to remove her soul from her body – or, this being impossible, to duplicate her body without a soul – inspiring the phantasm of Hadaly, as vaunted by Edison: 'the present gorgeous little fool will no longer be a woman, but an angel; no longer mistress but a lover; no longer reality, but the IDEAL!' (p. 54). Appearance is substituted for reality, raised to the level of perfection, and presented as ideal; the possibilities of technology realize the phantasms as pure and adequate wish-fulfillment in a new mode of idealization, henceforth conflating anaclitic and narcissistic choices of love, and radically transforming both psychology and metaphysics.[22] Hadaly would thus be the inversion of Tausk's Natalija: a creature of total decathexis, a body of pure phantasmatic projection, a woman evoking absolute desire. While Natalija summons up her own demonic double, Hadaly is, to the contrary, the perfect 'angelic' double of a man's wishes. As Villiers' Edison explains:

> What you love is this *phantom* alone; it's for the *phantom* that you want to die. That and that alone is what you recognize as unconditionally REAL. In short, it's this objectified projection of your own mind that you call on, that you perceive, that you CREATE in your living woman, and which is nothing but your own mind reduplicated in her. (p. 68)

This 'reduplication' entails a form of identity in difference, since it is the physical realization of a projected ideal. This difference, this supplement, is determined by the infinite distances that define the human condition: the gap that separates the desire from the spasm, thought from object, past from future, ideal from real. The technique of this simulacral economy is specifically deter-

mined by sound recording, inscribed in Hadaly's central cognitive organs, her lungs:

> Here are the two golden phonographs, placed at an angle toward the center of the breast; they are the two lungs of Hadaly. They exchange between one another tapes of those harmonious – or should I say, *celestial* – conversations: the process is rather like that by which printing presses pass from one roller to another the sheets to be printed. A single tape may contain up to seven hours of language. The words are those invented by the greatest poets, the most subtle metaphysicians, the most profound novelists of this century – geniuses to whom I applied, and who granted me, at extravagant cost, these hitherto unpublished marvels of their thought. This is why I say that Hadaly replaces *an* intelligence with Intelligence itself. (p. 131)

Like the topics of medieval discourse, Hadaly's thoughts are a compendium of the great sayings of European thought. As has become a commonplace in media theory since Marshall McLuhan's *The Gutenberg Galaxy* and *Understanding Media*, these techno-fantasies already indicate that each new medium contains within itself the previous medium (the gramophone encompasses the printing press) and that this technical extension of recording entails stylistic and cognitive expansions of discourse. Not only will phonography offer new means of communication (the circulation of information), but it will also actually reconfigure the very structure of thought itself. The result is an infinite series of citations and textual combinations, void of psychological identifications and projections. This is precisely what makes the artificial thought of an android possible. A new episteme thus dawns, based upon language as an absolute combinatory apparatus, where thought is no longer a function of syllogism but of collage and montage.

Intellectually, Hadaly – who literally contains the thoughts of many great thinkers – is a heterogeneous combinatory system of great ideas; erotically, she is virtually multifarious, containing women so numerous that, 'no harem could hold them all' (p. 199). *Such is the principle of montage.* The nineteenth century epistemological shift that established the objectification of 'man' (as described in Foucault's *The Order of Things*) created a new sort of ghost or phantom, a modern form of *döppelganger*, born from the specifically technological modes of reproduction established by photography, sound recording, and cinema. Thus modernity is not merely, as Foucault insists, that condition of knowledge contingent upon the constitution of 'man' as an 'empirico-transcendental doublet,' necessitating a double epistemological analysis: a transcendental aesthetic to analyze the body, and a transcendental dialectic to analyze history and language.[23] For if the principle of literature were transformed by the archive (now conceived of as a potential *mise-en-abîme* of interiority), it was equally transformed by the machine (as an infinite *mise-en-abîme* of exteriori-

ty). Foucault's analysis must be supplemented by the fact that the epistemological conditions of modernity already bore within them, as might be expected, the origins of modernity's demise: precisely where the inhuman begins to infiltrate the human; where mind and machine are conflated; where God as guarantor of creation is undermined by man's own means of mechanical and electrical reproduction. Thus the empirico-transcendental doublet is itself re-doubled by simulacral procedures; the other of man is neither the Nietzschean overman nor a new discursive field, as Foucault would have it; the other of man consists of the fragmented totality of his simulacra. Such is his imagination transformed into a domain of self-generating ruins.

It is thus no coincidence that the nineteenth century paradigm shift in narrative and lyrical construction is so closely allied with metapsychology in its role as an epistemology of madness. In *Le château des Carpathes* it is the death of La Stilla that motivates the fanaticism and evil revenge of Gortz, while the apparition of her simulacral double causes the madness of Telek. And all through *L'Eve future,* the android is characterized not merely as unhuman but also as dead – revealed, stretched out 'like a corpse on the dissecting table of an amphitheater' (p. 125) and later shipped across the sea to England in a coffin just like the undead Dracula to 'make the crossing as a dead person' (p. 76). Thus Edison warns Ewald that in his life with the android he must 'accept the perpetual challenge of two risks: madness and God' (p. 78). The use of such similitudes is to make the android seem more alive and more human, since in any case she is already susceptible to the vagaries of destiny and death. As in Poe's writing, there is a manifest equivocation between life and death, nostalgia and projection, madness and creativity: the surpassing of the boundaries of anaclitic love in the name of the extreme limits of narcissistic libido often leads to premature death and ghastly ritual.

Edison explains, speaking of his Eve, 'I shall endow this shade with all the songs of Hoffman's *Antonia*, all the passionate mysticism of Poe's *Ligeia*, all the ardent musical seductions of Wagner's potent *Venus*!' (p. 64). In a sense, this procedure – establishing the predecessors of a new literary tradition – is homologous with Gustave Flaubert's methodology in writing *La tentation de Saint Antoine* (*The Temptation of Saint Anthony*, 1874), which, like Hadaly's brain, is a book of citations composed not according to the author's intuitions but by his research in the archives and consequent recombination of sources. It also has resonances with Stéphane Mallarmé's great unfinished project of *Le livre* (which was to occupy him for much of the end of his life), a work that was to substantiate and instantiate his infamous claim that, 'Everything in the world exists to culminate in a book.'[24] Though Mallarmé's claim has been criticized as being an egregious example of the *fin-de-siècle* notion of 'art for art's sake,' in the context presented here it should rather be seen as an ultimate ex-

trapolation of a founding technique of modernity, the transformation of world into text, which entails the possibility of infinite combinations and permutations beyond the limits of psychologism, historicism, and scientism. Mallarmé's *Livre* takes Flaubert's technique to its most abstract limits. Yet must we consider this impossible, or at least improbable, enterprise as a result of Mallarmé's mental crisis of 1866? Was it the task that was to keep him sane for the rest of his life? Was it a utopian project according to which all of his other texts were articulated? Or was it simply one of a long line of unfinished modernist projects, necessarily incomplete precisely because the new episteme demanded incompleteness, incoherence and indeterminability as a condition for combination and permutation, those new modalities of metaphoricity and metamorphosis?

It is difficult, retrospectively, to say whether *Le château des Carpathes, L'Eve future, La tentation de Saint Antoine* and *Le livre* are utopian or dystopian projects, for every epochal shift transforms the forms of desire, the terms of nostalgia, and the conditions of utopia. Furthermore, these epistemological and technological paradigm shifts establish liminal moments and forms that maintain historical ambiguities and cognitive paradoxes, aesthetic contradictions and erotic equivocations – hence the narrative and iconographic richness of certain works, which shatter ancient genealogies all the while leaving all possible teleologies open-ended.

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Villiers' Edison explains to Ewald that through scientific knowledge he is capable of creating a creature, '*made in our image* and who, accordingly, will be to us WHAT WE ARE TO GOD' (p. 64); but this would be to challenge God, hence the risk of madness. Like Henry Adams' attempt to inaugurate a modern myth of the Dynamo to supercede the Medieval myth of the Virgin, the rhetoric of *L'Eve future* is constructed in such a way as to imbricate the tale with both classical and religious myths. Thomas Alva Edison is described as 'the man who made a prisoner of echo' (p. 7), and, insisting on the specificity of his own creative powers, Edison protests that, 'We needn't pretend to that life-creating cliché, *Fiat Lux*!, a phrase coined approximately seventy-two centuries ago and which, besides, according to immemorial tradition – perhaps invented, perhaps not – could never have been picked up by any recording machine' (p. 9). The originary theological moment of creation receives its technological homologue in the various recording technologies that made their appearance in the nineteenth century, and Edison goes so far in his hubris as to

lament the fact that all the previous sounds of history have been lost. In a Rabelesian mode, he exclaims:

> Even among the *noises* of the past, how many mysterious sounds had been heard by our predecessors, sounds which, for lack of an appropriate apparatus to fix them, fell forever into the void? ... Who in our time would be able to form an exact notion of them – for example of *the Sound of the Trumpets of Jericho*? ... of *the Scream of the Bull of Phalaris?* ... of *the Laugh of the Augurs* ... of *the Sigh of Memnon at Dawn?* etc. Dead voices, lost sounds, forgotten noises, vibrations lockstepping into the abyss, henceforth too distant ever to be recaptured! ... What sort of arrows would be able to transfix such birds? (p. 10)

Here, the artificiality of mechanical reproduction is clearly distinguished from theological creation, where the former henceforth takes on a teleological role while the latter is relegated to an archaeology caught in a perpetual yet impossible search for lost origins.

The turn of the century brought two antithetical answers to the problem of recapturing time: Villiers' radically novel, though ever ironic, ideal of electromechanical simulation (with all that it implies for gramophony and cinematography), and Proust's complicated and convoluted autobiographical narrative – divergent solutions that shaped the forms of modernist art, poetics, and philosophy. For while Villiers (like Cros, Edison, and Bell) foresaw, for better or worse, the eternalization of the voice and the transfixing of time in sound recording, Proust (in a Bergsonian mode) realized that time is precisely what causes all to remain in perpetual transformation and mutation – transient, ambiguous, equivocal – such that the very identity of the self is in perpetual flux. In this context, Villiers, true to his antimodernist sentiments, ironically bemoans the fact that the phonograph was limited in its capacities, incapable of recording certain present-day phenomena:

> Thus I would have reproached, for example, the Phonograph for its powerlessness to reproduce noise as *noises* ... the Fall of the Roman Empire ... rumors ... *eloquent* silences ... and, regarding the *voice*, that it can capture neither the voice of conscience? ... nor the voice of – blood? ... nor all those marvelous words *attributed* to great men ... nor the *Song of the Swan* ... nor *innuendos* ... nor the Milky Way? [25] (p. 10)

Retrospectively, Villiers here alludes to at least two of his earlier tales, *Le secret de l'ancienne musique* (*The Secret of the Ancient Music*), and *Le tueur de cygnes* (*The Swan Killer*). In *Le tueur de cygnes*, Villiers – with his typical sardonic defense of tradition and offense at the new scientific spirit – recounts the tale of his archbourgeois anti-hero, Dr. Tribulat Bonhomet, who personifies the spiritual impoverishment and positivist lack of imagination that Villiers saw to be the mark of the nineteenth century. The melomaniacal Tribulat Bonhomet decides

to hear for himself the legendary beauty of the swan's dying song. Thus, stalking the creatures at dawn, he strangles them: 'Musically he valued only the singular softness *of the timbre* of these symbolic voices that vocalized Death as a melody.'[26] Such would be a *machine célibataire* of the voice. Bringing to an end a great French tradition of romanticizing the swan – from Hugo, Baudelaire, and Mallarmé through Valéry – Villiers fixes an ideal by sounding its death knell.

In *Le secret de l'ancienne musique* (a text dedicated to Richard Wagner), Villiers does the same for the limits of human music. In this tale, the National Academy of Music, needing to evaluate a new composition by a German composer, runs into difficulty, as the piece is for solo *pavillon chinois* (a pole hung with bells, jingles, and decorations), a military musical instrument fallen into disuse. They finally find an old master of the instrument, who agrees to perform the work. The next day, at the Opera, as he is getting ready to play, he looks at the score to discover that it was composed exclusively of *silences*! 'He played. Without flinching. With a mastery, a sureness, a *brio* that struck the entire orchestra with admiration. His execution, always sober, but full of nuances, was of a style so polished, of a rendering so pure, that, strange as it was, at some moments it seemed that *it was heard*!'[27] Yet against the bravos of the audience, the professor protested, claiming that the score was too difficult: 'There is no melody in it. It's a charivari! Art is lost! We are falling into the void.'[28] (We might remember that in *Le tueur de cygnes* Bonhomet notes of the swan song that, 'only this music, once heard, helped him to bear the disappointments of life, and all other music seemed to him to be but a charivari, mere "Wagner".')[29] At this moment the musician fell dead, taking with him the secret of the ancient music – a secret that was not to be rediscovered until John Cage first composed and performed in 1952 his totally silent work, *4'33*, establishing a new epoch in the aesthetics of Western silence and music.

These catastrophes of the voice – necessitating prosthetic reconstruction and utopian reproduction – fluctuate between the limits of sense and nonsense, silence and noise, lyricism and prose, nostalgia and forgetting. They bespeak the demise of Orpheus, in a world where nature can no longer be separated from culture.

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In 1874, Bell's experiments preceding the invention of a speaking telephone had him attach a dead man's ear to a metal horn.[30] Though this was not to offer the solution to his problem, the organic, corporeal model indicated by this grotesque and macabre prosthesis was to inform an entire lineage of literary fanta-

sies, establishing a particularly modern form of teratology. Its epitome is to be found in Marcel Schwob's tale 'La machine à parler' ('The Talking Machine'), where the narrator encounters a strange man who, in the guise of introducing his invention, cites the words of one of the narrator's articles:

> The voice, which is the aerian sign of thought, whence of the soul, which instructs, preaches, exhorts, prays, praises, loves, through which the entire being is manifested in life, nearly palpable by the blind, impossible to describe because it is too undulating and diverse, in fact too alive and incarnate in too many sonorous forms, the voice that Théophile Gautier gave up trying to put into words because it is neither soft, nor dry, nor hot, nor cold, nor colorless, nor colorful, but has something of all that in another domain, that voice that one cannot touch, that one cannot see, that most immaterial of terrestrial things, that which most resembles a spirit, is stolen on the fly by science with a stylet and buried in small holes on a turning cylinder.[31]

The inventor, wishing to pass from sheer reproduction to creativity, insists on the generative physical powers of the word, alluding to Poe's tale 'The Powers of Words' where in the realm of the dead the conversation between Oinos and Agathos follows the old Platonic notion that all motion – especially that of words – has infinite reverberations in the universe. Vocal vibrations cause the birth of entire universes, and thus all speech acts are ultimately connected to the originary creativity of the Godhead. In what may be retrospectively seen as a Platonic-Spinozistic-Borgesian fantasy, the infinite nostalgia awakened by such a cosmogony finally alights on the desire of Agathos. For Oinos asks:

> But why, Agathos, do you weep – and why, oh why do your wings droop as we hover over this fair star – which is the greenest and yet most terrible of all we have encountered in our flight? Its brilliant flowers look like a fairy dream – but its fierce volcanoes like the passions of a turbulent heart.[32]

Agathos responds:

> They *are*! – They *are*! This wild star – it is now three centuries since, with clasped hands, and with streaming eyes, at the feet of my beloved – I spoke it – with a few passionate sentences – into birth. Its brilliant flowers *are* the dearest of all unfulfilled dreams, and its raging volcanoes *are* the passions of the most turbulent and unhallowed hearts.[33]

Wings of desire! Infinitude of nostalgia! Microcosm as macrocosm. Here, simile becomes tautology, metaphoricity is raised to an ontological level, and the reality of the world is reduced to the power of the word – precisely as Mallarmé would have had it in his *Livre*, and as Proust would attempt to capture time lost in his *Recherche*.

With such a metaphysics in mind, the inventor in Schwob's tale establishes a physics to duplicate such creativity, arguing that, 'You are scientists and poets; you know how to imagine, conserve, even resuscitate; but creation is unknown to you.'[34] Hence his creation of an inorganic, inanimate talking machine described by the narrator:

> The man led me into a room that I can no longer see, so terrible it seemed to me because of the monster that stood there. For at its center there was, as high as the ceiling, a giant throat, distended and speckled, with hanging and swelling folds of black skin, a breath of subterranean tempest, and two enormous lips trembling above it. And among the grinding of wheels, and the cries of metal wires, one saw the heaps of leather shudder, and the gigantic lips hesitatingly yawn. Then, at the red depths of the gaping abyss, an immense fleshy lobe stirred, rose, waddled, stretched itself up, down, right, left; a full gust of wind burst out within the machine, and articulated words gushed out, propulsed through an extrahuman path. The explosions of consonants were terrifying; for the P and the B, similar to a V, escaped directly from the rim of the swollen and black labia: they appeared to be born right under our eyes; the D and the T shot forth from under the snarling upper mass of upturned leather; and the R, deliberately prepared, had a sinister roll to it. The vowels, bluntly modified, gushed out of the gaping muzzle like the jets of a waterspout. The stuttering of the S and the CH surpassed the horror of the most prodigious mutilations.[35]

With the keyboard controlled by a nervous, skinny little woman (the soul of the apparatus, the muse of the inventor), the machine began to speak, '*AU COM-MEN-CE-MENT FUT LE VER-BE*' (In the beginning was the Word). The inventor, wishing to reveal the truth of the new epoch of the Word, explained that this is a lie. He recounted in his own voice – now, like that of the machine, without nuance, because nuance is something of the soul, something to be suppressed – that the machine shall rather say, '*J'AI CRÉÉ LE VERBE*' (I have created the Word). Whence the machine commenced, with a monstrous stuttering, to intone, '*VER-BE VER-BE VER-BE*,' at which point the machine self-destructed, the woman disappeared, and the inventor became mute, having definitively lost his voice.

This vocal catastrophe was not due to the blasphemous nature of the words, nor to the impossibility of the presumed powers of sheer enunciation. Rather, it was the logical conclusion of having chosen the wrong paradigm of artificial speech. The breakdown is mechanical, not psychological or theological. For vocal simulacra were not to be developed by physically imitating the organic human vocal apparatus but rather through the exigencies of mechanical, electric, and electronic recording. Thus it was rather Villiers' *Eve* that bespoke the

paradigm that was to reign, with her phonographic organ and her montage mentality.

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If one were to search for the high modernist aesthetic epitome of this paradigm, where creation and nostalgia, voice and erotics, reproduction and linguistics, machine and body, Eros and Thanatos converge, it would certainly be in Luciano Berio's electro-acoustic work, *Visage* (1961). For electro-acoustic music is one of the major manifestations of the machine-human hybrid envisioned in nineteenth century literature and science, and *Visage* instantiates the limits of the genre. This work, for electronic sounds on magnetic tape mixed with the recorded voice of Cathy Berberian, is described by the composer:

> ... an important aspect of the project was to expose non-articulated vocal sounds and then to move to the 'discovery' of vowels, the consequent opposition and interaction between vowels and consonants, the syllables, the vocal inflections (emotions) and finally 'words' (*PAROLE* in Italian). From then on, there are constant references to vocal gestures and language stereotypes: television-English, Italian, Neopolitan dialect, Hebrew, etc., each with various associations to emotional states. The electronic sound expands and develops these vocal and language gestures, giving a musical reason to the experience.[36]

The musicologist Paul Griffiths further describes the work:

> Following the example of [Stockhausen's] *Gesang der Jünglinge* (but not of his own *Thema*, which had used only vocal sounds), Berio here presents a mélange of the vocal and the purely electronic, with the difference that the voice by no means resists interpretation as a character. She is heard in a natural recording almost throughout, but only at two points does she stumble towards verbal expression, towards the enunciation of 'parole' ('words'). For the rest she laughs, moans, sighs, cries and gabbles in nonsense language, all the while evoking an emotional turmoil admitting violent swings from anguish to erotic excitement.[37]

Griffith's description is accurate, but his characterization of the piece as a 'tape drama' needs qualification, for the dramatic nature of this work has little to do with the catharsis of classic tragedy, and everything to do with modernist post-mortem tragedies of disembodiment and electronic reproduction. If the work suggests 'character,' it is something other than that of the very human singer Berberian, since it signals a hybrid, prosthetically constructed being, bodiless, purely sonic, infinitely reproducible. And if this character evinces an emo-

tional state, the specific fluctuations between anguish and excitement are new to the eternal conflict between Eros and Thanatos.

It is almost as if Berio's piece were a gloss upon the possibility of a 'talking machine' in Schwob's tale: the singing machine that is *Visage* reveals once again how the failures of science and theology give rise to masterpieces of art. Here, lyricism is no longer bound to the corporeal rhythms and vocal limits of the human body; the inexorable continuity of the tape, the endless possibilities of montage, the infinite subtleties of recording, and the vast potentials of electronic sound production all combine to establish a musical context in which the human voice is variously highlighted, hybridized, and transformed. Just as the form of one medium is contained within subsequent media through a technical *mise-en-abîme*, so too are the new narrative figures, poetic tropes, and lyrical forms transmogrified within contemporary media, where past catastrophes give rise to contemporary revelations.

Notes

1. This paragraph is based on Allen S. Weiss, 'The Theater of Possession,' *Sulfur* 33 (1993), pp. 134-36. Curiously, the history of Morzine has been largely suppressed. For example, in Yannick Ripa, *La ronde des folles : Femme, folie et enfermement au XIX^e siècle* (Paris: Aubier, 1986), there is only one mention of Morzine; Michel Foucault, too, seems to have ignored this case. The only major study is a rare volume, Catherine-Laurence Maire, *Les possédées de Morzine* (Lyon: Presses Universitaires de Lyon, 1981). On the related topic of the nineteenth century transformation of the forms of popular ritual into symptoms of hysteria and dream symbols, see Peter Stallybrass and Allon White, *The Politics and Poetics of Transgression* (Ithaca, N.Y.: Cornell University Press, 1986).
2. For a detailed account of the relations between such pathology and modernity, see Allen S. Weiss, 'The Other as Muse: On the Ontology and Aesthetics of Narcissism,' in David B. Allison, Prado de Oliveira, Mark S. Roberts, Allen S. Weiss, eds., *Psychosis and Sexual Identity: Toward a Post-Analytic View of the Schreber Case* (Albany: State University of New York Press, 1988), pp. 70-87.
3. Jules Verne, *Le château des Carpathes* (1892; Paris: Le Livre du Poche, 1991), p. 142. Further references will be cited in parentheses. All translations from the French are by Allen S. Weiss.
4. On the relations between illusionism and artistic technology in the nineteenth century, see Erik Barnouw, *The Magician and the Cinema* (Oxford: Oxford University Press, 1981) and Françoise Lévy, *Lanterne magique et fantasmagorie* (Paris: Musée National des Techniques, 1990).
5. De Gerundo, *De l'éducation des sourds-muets de naissance* (Paris: Mequignon, 1827), pp. 398 and 423.

6. Cited in Jacques Perriault, *Mémoires de l'ombre et du son: une archéologie de l'audio-visuel* (Paris: Flammarion, 1981), p. 185. This citation is based on the French translation.
7. See John Harvith and Susan Edwards Harvith, eds., *Edison, Musicians, and the Phonograph: A Century in Retrospect* (Westport, CT: Greenwood Press, 1987), pp. 13-14.
8. Michel Carrouges, *Les machines célibataires* (Paris: Arcanes, 1954). A major exhibition based on this theme was curated by Harald Szeeman in 1976 at the Musée des Arts Décoratifs in Paris; the catalogue was edited by Jean Clair and Harald Szeeman, *Junggesellenmaschinen/Les Machines Célibataires* (Venice: Alfieri, 1975). The theme was taken up again in part of a more recent exhibition, *L'Ame au corps* at the Grand Palais in Paris 1993-94, with the accompanying catalogue also edited by Jean Clair. Some key works in which bachelor machines appear: Villiers de l'Isle-Adam, *L'Eve future*; Jules Verne, *Le château des Carpathes*; Alfred Jarry, *Le Surmâle*; Raymond Roussel, *Impressions d'Afrique*; H.G. Wells, *The Time Machine*; Franz Kafka, *In the Penal Colony*; Francis Picabia, *La fille née sans mère*; Marcel Duchamp, *La mariée mise à nue par ces célibataires, même*; Heinrich Anton Müller, *Maschinen*; Fritz Lang, *Metropolis*; James Whale, *Frankenstein*; Adolfo Bioy Casares, *The Invention of Morel;* Richard Lindner, *Boy With Machine*; Jean Tinguely, *Machine-Happening-Autodestructive*; Harry Smith, *Heaven and Earth Magic*. Three texts are of particular use in tracing the genealogy of such electro-human hybrids within the history of experimental sound art – Douglas Kahn, 'Introduction: Histories of Sound Once Removed'; Charles Grivel, 'The Phonograph's Horned Mouth'; Gregory Whitehead, 'Out of the Dark: Notes on the Nobodies of Radio Art' – in Douglas Kahn and Gregory Whitehead, eds., *Wireless Imagination: Sound, Radio, and the Avant-Garde* (Cambridge, Mass.: M.I.T. Press, 1992), pp. 1-30; 31-62; 253-64. Another recent study of interest is Franc Schuerewegen, *A distance de voix* (Lille: Presses Universitaires de Lille, 1994).
9. Michel Carrouges, 'Mode d'emploi,' in *Junggesellenmaschinen / Les Machines Célibataires*, p. 21.
10. Jean Clair, 'Les machines célibataires,' in *L'Ame au corps*, pp. 433-39.
11. Daniel Paul Schreber's *Denkwürdigkeiten eines Nervenkranken* was written in 1901 and published in 1903, though soon after suppressed and taken out of circulation by his family. See Sigmund Freud, *Psychoanalytic Notes Upon an Autobiographical Account of a Case of Paranoia (Dementia Paranoides)* (1911), in *Three Case Histories*, edited by Philip Rieff (New York: Collier, 1963), pp. 103-86; and Sigmund Freud, 'On Narcissism: An Introduction' (1914), in *General Psychological Theory*, edited by Philip Rieff (New York: Collier, 1963), pp. 56-82; the literature on Schreber is vast: see the texts and bibliography in David B. Allison, et al., *Psychosis and Sexual Identity*. In *The Visible and the Invisible*, Maurice Merleau-Ponty began to investigate the ontological implications of the metapsychology of narcissism; his initial efforts were expanded by Marcel Gauchet, 'Freud, Une Psychanalyse ontologique,' *Textures* 4-5 (1972), pp. 115-56; and *Textures* 6-7 (1973), pp. 69-112. For a study of Schreber in relation to communication theory and discursive formations, see Friedrich A. Kittler, *Discourse Networks, 1800/1900*, trans. Michael Metteer, with Chris Cullens (Palo Alto, CA: Stanford University Press, 1990), pp. 290-311.
12. Mark Roberts, 'Schreber as Machine, Technophobe, and Virtualist,' in Allen S. Weiss, ed., *Experimental Sound & Radio* (Cambridge, Mass.: MIT Press, 2001), p. 32.

13. Victor Tausk, 'On the Origin of the Influencing Machine in Schizophrenia,' *Psychoanalytic Quarterly* (1933); reprinted in *Incorporations: Zone* 6 (1992), eds. Jonathan Crary, Michel Feher, Sanford Kwinter, Ramona Naddaff, p. 544. On the relations between this problematic and Lacanian film studies, see Joan Copjec, 'The Anxiety of the Influencing Machine,' *October* 23 (1982), pp. 43-59; for a specific analysis of a 'bachelor machine' in the context of 'influencing machines,' see Annette Michelson, '"Anémic cinema": Reflections on an Emblematic Work,' *Artforum* XXII, no. 2 (1973), 64-69. For one parallel example bearing on the history of recording technology, where the formal structures of avant-garde film find phanasmatic precursors in a case of schizophrenia, see Allen S. Weiss, 'Kinomadness,' in *Shattered Forms: Art Brut, Phantasms, Modernism* (Albany: State University of New York Press, 1992), pp. 115-26.
14. Ibid., p. 544.
15. Ibid., p. 560.
16. Ibid., p. 562.
17. Ibid., p. 550.
18. Villiers de l'Isle-Adam, 'La machine à gloire,' in *Contes cruels* (Paris: Gallimard, 1983), p. 112.
19. Ibid., p. 114.
20. Villiers de l'Isle Adam, *L'Eve future* (1886); this work exists in numerous editions, the most accessible of which is the Gallimard / Folio edition. It has been translated into English as *Tomorrow's Eve* by Robert Martim Adams (Urbana: University of Illinois Press, 1982); all citations are from this volume (noted in parentheses), occasionally slightly modified. *L'Eve future* has recently been investigated in its role as a prototypical work at the origins of the invention of the cinematic apparatus, most notably in Annette Michelson, 'On the Eve of the Future: The Reasonable Facsimile and the Philosophical Toy,' *October* 29 (1984), pp. 2-21; and Raymond Bellour, 'Ideal Hadal,' *Camera Obscura* 15 (1986), pp. 111-34. More germane to the current study, as it discusses the centrality of phonography in Villiers, is the chapter, 'Edison's Recorded Angel,' in Felicia Miller Frank, *The Mechanical Song: Women, Voice, and the Artificial in Nineteenth-Century French Narrative* (Palo Alto CA: Stanford University Press, 1995), pp. 143-71.
21. Étienne Bonnot and Abbé de Condillac, *Traité des sensations* (1754; Paris: Fayard, 1984); on the relation between Condillac's sensationalist philosophy and Villiers' fiction, see Michelson, 'On the Eve of the Future.'
22. Though beyond the scope of this study, it might be noted that Alfred Jarry's *Le Surmâle* (1902) offers what may be construed as an inverted, perhaps ironic male homologue to Villiers' *Eve*, where an erotic machine becomes amorous of a man.
23. Michel Foucault, *The Order of Things*, n.t. (1966; New York: Vintage Books, 1973), pp. 318-22.
24. Stéphane Mallarmé, 'Le livre, instrument spirituel,' is a section of 'Quant au livre,' in *Oeuvres complètes* (Paris: Gallimard/Pléiade, 1945), p. 378. The extensive notes for Mallarmé's *Livre* were published, annotated and introduced by Jacques Scherer, *Le 'Livre' de Mallarmé* (Paris: Gallimard, 1957). It should be noted that if taken out of the context of Mallarmé's work, *Le Livre* might seem to be a typical work of a nineteenth century *fou littéraire* (antecedents to the *écrits bruts* valoried by Jean Dubuffet), similar to those amassed in André Blavier in *Les fous littéraire*

(Paris, Henri Veyrier, 1982). Mallarmé's *Livre* may also be seen as a prototype for what has become a rather typical sort of modernist *magnum opus*, the unfinished work, which would include, to note just a few of the most celebrated examples, Proust's *A la recherche du temps perdu*, Musil's *The Man Without Qualities*, Heidegger's *Being and Time*, Merleau-Ponty's *The Visible and the Invisible*.

25. The pun on *Voie lactée / Voix lactée* (Milky Way/Milky Voice) is worthy of note.
26. Villiers de l'Isle-Adam, 'Le tueur de cygnes' (1886), in *Claire Lenoir et autres contes insolites* (Paris: Flammarion, 1984), p. 158.
27. Villiers de l'Isle-Adam, 'Le Secret de l'ancienne musique,' in *Contes cruels* (Paris: Gallimard / Folio, 1983), p. 182.
28. Ibid., p. 183.
29. 'Le tueur de cygnes,' p. 156.
30. Michael Chanan, *Musica Practica* (London and New York: Verso, 1994), p. 239. On this problematic, see Mark Seltzer, *Bodies and Machines* (London and New York: Routledge, 1992). The human-machine hybrid was a central trope of modernism, as evidenced in Futurism and Dadaism, as well as in numerous manifestations of Art Brut.
31. Marcel Schwob, 'La machine à parler,' in *Le roi au masque d'or* (1892; Paris: Union Générale d'Éditions, 1979), p. 113.
32. Edgar Allen Poe, 'The Power of Words,' in *The Complete Tales and Poems* (New York: Modern Library, 1938), p. 442.
33. Ibid., p. 443.
34. Ibid., p. 114.
35. Ibid., p. 115.
36. Luciano Berio, in a letter to Allen S. Weiss, reprinted in David B. Allison, et al., *Psychosis and Sexual Identity*, p. 142n. This work is available on VOX-TURNABOUT TV u.c. 331 027, recently rereleased on CD. It is of interest to note that the scheduled broadcast of this work on Italian radio was suppressed, as it was deemed obscene (parallel to the fate of Artaud's earlier *Pour en finir avec le jugement de dieu*), a testimony to the erotic powers of the disembodied voice. For a contemporary consideration of this theme, see John Corbett and Terri Kapsalis, 'Aural Sex: The Female Orgasm in Popular Sound,' in *Experimental Sound and Radio*, pp. 97-106.
37. Paul Griffiths, *Modern Music: The Avant-Garde Since 1945* (New York: Braziller, 1981), p. 149.

Loïe Fuller and the Art of Motion

Body, Light, Electricity, and the Origins of Cinema

Tom Gunning

'O body swayed to music, O brightening glance
How can we know the dancer from the dance?'
William Butler Yeats, *Among School Children*

As we enter the twenty-first century, one of our tasks in recovering the history of cinema in the previous century (and its brief, but crucial, nineteenth century prologue) must be to recover the utopian penumbra cast by cinema's advent. Like the range of new media appearing today, the emergence and transformation of cinema that took place in its first two decades not only introduced new technologies and modes of representation, but also inspired people to think broadly about the way the invention of motion pictures interacted with new ways of conceiving the world and new ways of making art. Roman Jakobson has described how thinking about the cinema in the teens not only inspired the aesthetics of Russian Futurism in its belief that 'static perception is a fiction' but also his own critique of the dichotomy of synchrony and diachrony in Saussure's linguistics:

> In criticizing this conception, I referred, by no means accidentally, to the example of cinematographic perception. If a spectator is asked a question of synchronic order (for example, 'What do you see at this instant on the movie screen?') he will inevitably give a synchronic answer, but not a static one. For at that instance he sees horses running, a clown turning somersaults, a bandit hit by bullets. In other words, these two effective oppositions, synchrony/diachrony and static/dynamic do not coincide in reality. Synchrony contains many a dynamic element, and it is necessary to take this into account when using a synchronic approach.[1]

Writers and thinkers in the early part of the twentieth century proclaimed the cinema, among other things, the first art of the machine, the art form of the twentieth century, and a universal language – all appellations that carried utopian if not millennial overtones. Utopian aspects of the past should never be judged in terms of their realization (or the lack of it), but rather as expressions

of broad desires that radiate from the discovery of new horizons of experience. Unrealized aspirations harbor the continued promise of forgotten utopias, an asymptotic vision of artistic, social, and perceptual possibilities.

I would like to deal with the archeology of one such utopian conception of cinema, one that does not stress the communicative power imaged in the expectation of a universal language and that has a dialectical relation to cinema conceived as an art of the machine. Cinema as an art of motion remains a neglected vision of cinematic possibilities whose development in the twenties (in the work of absolute filmmakers like Eggeling, Richter, Ruttman, and Fischinger and in the theories of cinematic rhythm of Epstein, Dulac, Vertov, and Eisenstein) lies beyond the scope of this paper. Recently the theoretical work of philosopher Gilles Deleuze on the role of the 'Movement-Image' in the cinema has re-ignited an interest in this neglected tradition.[2] However, Deleuze's lack of careful attention to film history may unfortunately reduce the art of movement to an apparently anterior state of development, compared negatively to the 'Time-Image,' which, according to Deleuze, emerges in the cinema after World War II. Deleuze's reconsideration of the concepts of movement and duration introduced by turn-of-the-century philosopher Henri Bergson should alert us that we cannot easily dismiss those formative years of cinema that were contemporary with Bergson's thought. The origins and archeology of the concept of an 'art of motion' lie very much in the turn of the last century and reveal the ways cinema could appear as a resolution of tensions within the other arts and even become a central philosophical issue.

Most frequently the manifestos of Futurism, especially the Italians, are cited as original texts founding a new artistic vision in the perception and representation of motion. The Technical Manifesto of Futurist Painting from 1910 declared:

> Indeed all things move, all things run, all things are rapidly changing. A profile is never motionless before our eyes, but it constantly appears and disappears. On account of the persistency of the image upon the retina, moving objects constantly multiply themselves, their form constantly changes like rapid vibrations in their mad career. Thus a running horse has not four legs but twenty and their movements are triangular.[3]

I do not need to rehearse here the debt owed by Futurist painters to the chronophotography of Marey and others, although I do want to renew our sense of the revolutionary nature of the possibility of art forms that could capture the trajectory of time and motion at the end of the last century and their avant-garde and utopian implications for modernist artists.

But we can go back further than the Futurists for the fascination exerted on avant-garde artists by the spectacle of motion and especially the conception of

an art form in which motion itself becomes dominant, seeming to reconfigure the contour of objects and to banish the habits of static perception. The *bête noir* of the Futurists, the Symbolists and Decadents of the 1890s (the target of their Oedipal scorn focused on this pervious generation partly in order to conceal a fundamental indebtedness to them), had already imagined an art of motion. The Symbolists' concept of an art of continual transformation supplied not only new techniques for making art, but announced new perceptions of the world in which the perceptible and the ideal or spiritual worlds intersected.

For the Futurists, the art of motion sprang from the modern environment inspired by the rapid movement of new machines, such as the race car celebrated in the 1909 founding 'Manifesto of Futurism,' which declared it superior to the *Victory of Samothrace*.[4] For the Futurists, motion meant speed, shock, and danger. But for the Symbolists of a generation earlier the art of motion evoked the harmonious rhythms of the dance. The dancer (and in this heavily gendered discourse we are speaking of a woman dancer dancing primarily for men) promised more to the Symbolists than grace or erotic promise. In fact, as critic Frank Kermode has demonstrated, the dancer embodied the Symbol itself, balancing in her motion the antithetical forces which the Image alone could reconcile:

> The Image is to be all movement, yet with a kind of stillness. She lacks the separable intellectual content, her meanings, as the intellect receives them, must constantly be changing. She has the impassive characterless face of a Salomé, so that there is nothing but the dance, and she and the dance are inconceivable apart, indivisible as body and soul, meaning and form, ought to be.[5]

While the Futurists' desire for an art 'lacking a past and free from traditions' eventually drew them to the cinema as a modern art of speed manufactured by machines,[6] can we really find a parallel between the Symbolists of the 1880s and '90s and the flickering moving images that began to appear on screens around the world only at the end of this period? What connection can be made between this earlier desire for a hieratic 'art of motion' and early cinema? Although somewhat entangled, I believe the connection is direct and profound.

The first moving images, whether projected on a screen or seen in the ground glass of Edison's Kinetoscope, fall into two broad groups. Some, most typically those of the Lumière Company, seem to derive primarily from the amateur photographs of the late nineteenth century.[7] They show the places, the pastimes and the companions of the films' makers, as well as travel views from around the world. Like a new eye suddenly opening onto the world, these films root their images in a deep and open space, filled with the light of the sun and the air of nature. Other films, such as the first Edison kinetoscope films, as well as the films of the Skladanowsky brothers, present performers usually

playing within shallow spaces, often shot against a darkened background that forces us to focus intently on the movement of the human figures. Rather than capturing a world, these images limn the outlines of highly trained bodies, accenting the play of muscles or limbs, and include the flexing of strongmen, the gyrations of acrobats, and the rhythms of dancers. These images in their abstracted universe of performance recall the scientific studies of the body of Muybridge and Marey and other chronophotographers, blending the intense scrutiny of scientific observation with a spectator's absorption in the highlighted star turn of the variety stage.

Among the various acts repeatedly filmed in the first few years of cinema production, a genre of dance appears frequently that seems more unfamiliar and odd today than even the clearly outmoded costumes of Arabian acrobats, mustachioed strongmen, or Sioux Indians. A woman dances, or rather, primarily manipulates a large quantity of white material into billowing shapes that alternately hide and reveal the dancer within them. Films of this sort abound in the film catalogues of the 1890s, including Edison's four different versions of Annabelle's Serpentine dance (August 10, 1894; February 1895; April-August 1895; May 8, 1897),[8] one by the Skladanowsky Brothers with 'Madame Alcion' (presumably Emmilienne d'Alençon, a Fuller imitator),[9] and a version in 1897 by the Lumière company with quick change artist Fregoli performing the dance in drag – and literally scores of other identified and unidentified early films.[10] Archives posses many such films, often by unknown production companies with generally unknown performers manipulating these sinuous cloths. What are these strange dances often described as 'Serpentines' and where do they come from?

Like almost everything in early cinema, they come from elsewhere and were imported into the cinema as pre-existing forms. Like so much of the 'body art' of early cinema, the Serpentine dance came from the vaudeville stage and was an immensely popular form. Although claims of invention in the popular arts are difficult to authenticate (and nearly meaningless), the Serpentine was most definitely associated with a single (although widely imitated) dancer who most likely invented it, cobbling together several related practices – and it most certainly made her name famous worldwide: Loïe Fuller.[11] It is not only Fuller's unique approach to this dance but the cult-like devotion that developed around her that made the Serpentine the epitome of Symbolist ideals and that forges a link between the mechanical popular entertainment of early cinema and the rarefied ideas of Symbolist aesthetics.

In spite of her seemingly exotic first name (actually a family nickname for Louise, which gained the umlaut during her stay in Paris), Loïe Fuller was a Chicago girl, a dancer, and performer of modest achievement until, in 1892, at the end of a tour, she performed her new dance in New York City and caused,

at least, a mini-sensation. Named the 'Serpentine' by a theater manager, this first form of the dance was described by a New York reviewer:

> Suddenly the stage is darkened, and Loïe Fuller appears in a white light which makes her radiant and a white robe which surrounds her like a cloud. She floats around the stage, her figure now revealed, now concealed by the exquisite drapery which takes forms of its own and seems instinct with her life. The surprised and delighted spectators do not know what to call her performance. It is not a skirt dance, although she dances and waves a skirt. It is unique, ethereal, delicious. As she vanishes, leaving only a flutter of her robe upon the stage, the theater resounds with thunders of applause. Again she emerges from the darkness, her airy evaluations now tinted blue and purple and crimson, and again the audience rise at her and insist on seeing her pretty, piquant face before they can believe that the lovely apparition is really a woman.[12]

Fuller took her dance to Paris, where it caused a major sensation at the Folies-Bergère in the 1892-93 season. Although the dance evolved during her long career in Paris, the New York premiere introduced its basic elements. As Fuller described them in her attempt to copyright the dance before she left the U.S.; the dance began with a darkened stage followed by a series of tableaux derived from the manipulations of drapery, combined with the effects of colored light and shadow. The tableaux that were named after the forms of Fuller's drapery seemed to resemble large flowers, surf, a spider web, and a butterfly, and each was separated by a return to darkness into which the dancer disappeared.[13] This dance employed very little of the rhythm and movements found in traditional choreography, offering instead the constantly transforming formal effects of the drapery and the visual pyrotechnics created by the colored and sharply focused electric light and shadows using the swirling surface of Fuller's fabric as a screen for the projection of an equally protean succession of colors.

Fuller's background lay entirely in the world of the musical hall and burlesque and comedy, and, although she later assumed the airs of a high priestess of the arts and forged friendships with such cultural figures as Auguste Rodin and Anatole France, there is no question that the inspiration for her revolutionary dance came from the realm of popular spectacle and the turn-of-the-century fascination in the new decorative possibilities of electrical light. The intersection of the Serpentine with aesthete Parisian Symbolist culture might seem unlikely if one focuses simply on their contrasting backgrounds and ideology; but this encounter across cultural hierarchies not only elevated this Chicago dancer into a pivotal position in modern art but also provided the Symbolists with the most vivid embodiment of the ideal their new aesthetic pursued. From the perspective of the history of early cinema and the impor-

tance of the new medium as a mediator of modern experience, the collision Fuller induced between the popular and the elite, the aesthetic and the technological, reveals the revolutionary potential of this seemingly simple performance.

The Symbolist interpretation of Fuller's dance emphasized its role as a new art of motion, in which no form remains solid or static but rather dissolves into a continually changing spectacle of metamorphosis unfolding before the audience. The new aesthetics saw motion as a force in itself, a plasmatic energy that creates forms rather than simply moves them about, strongly opposed to the classical conception of movement as a series of points along the trajectory of a self-sufficient object that Bergson attacked as a confining illusion of the mind. The Symbolists found in Fuller's dance an image of their own conception of creativity: the symbol as the radiating center of unending transformation. In the bible of the Symbolist aesthetic, J. K. Huysmans' 1884 decadent novel *A Rebours*, the main character Des Esseintes, the consummate aesthete, described this new artistic energy as embodied in the dance of Salomé, captured first in the painting by Gustave Moreau (whose *Salomé Des Esseintes* describes as the 'Goddess of immortal hysteria') and then in Stéphane Mallarmé's poetic dialogue 'Herodias.'[14] Salomé's blending of eroticism and death, dance and religion (or sacrilege) made her a pivotal image in Symbolist aesthetics, and it is not surprising that when Fuller left the Folies-Bergère to star in her own spectacle she chose to portray Salomé.

But the Symbolists saw in Fuller more than a thematic link to the realm of mythic dance. Her performance at the Folies-Bergère startled them with a drama of transformation and metamorphosis that recalled their own methods. Des Esseintes described Mallarmé's evocative technique in this way:

> Catching analogies the most remote, he would often designate by a word that suggests by an effect of likeness at once form, scent, color, quality, brilliancy ... He thus contrived to do away with the formal statement of a comparison, which arose of itself in the reader's mind by analogy, once he had comprehended the symbol, and avoided dissipating the attention over each of the several qualities which might otherwise have been presented one by one by a series of adjectives strung in a row, concentrating it instead on a single word, on one whole, producing, as an artist does in a picture, one unique and complete effect, one general aspect.[15]

As Huysmans (through his fictional character Des Esseintes) had described Mallarmé's poetry as creating an effect of superimposed images and simultaneity, Mallarmé himself embraced Loïe Fuller's art as the 'theatrical form of poetry par excellence,' surpassing the attempts of Wagner, which were still tied to storyline, character, and stage decor. Fuller's dark and bare stage, with her body and veils splashed with colored light, formed the entire spectacle.

This abstraction seemed not only revolutionary to Mallarmé but also evocative of the unique atmosphere beyond specific reference or mimesis that the Symbolist aesthetic sought. Fuller embodied poetry but a poetry without the need for words. As the embodiment of Symbol, she was meaning divorced from specificity, an image unmoored by reference or representation, becoming purely the flow of movement in all its sensuality and its constantly changing, evocative pursuit of analogy – the pulsing matrix of meaning itself.[16] Mallarmé finds in Fuller's dance what Julia Kristeva described as the semiotic rhythm: 'Indifferent to language, enigmatic and feminine, this space underlying the written is rhythmic, unfettered, irreducible to its intelligible verbal translation; it is musical, anterior to judgment.'[17]

Mallarmé seemed to have dreamed of a form of dance like Fuller's even before he saw her. In his 1886 essay on ballet he claimed the dancer:

> ... is therefore always a symbol, never a person.
> *Here* is a judgment, *here* is an axiom for the ballet!
> I mean that the ballerina *is not a girl dancing*; that considering the juxtaposition of those group motifs, *she is not a girl*, but rather a metaphor which symbolizes some elemental aspect of earthly form: sword, cup, flower, etc., and that *she does not dance* but rather with miraculous lunges and abbreviations, writing with her body, she *suggests* things which the written work could *express* only in several paragraphs of dialogue or descriptive prose. Her poem is written without the writer's tools.[18]

Mallarmé ended this essay with words that seemed to anticipate Fuller's unique forms presciently:

> Through her always ultimate veil, she will give you back your concepts in all their nakedness and silently inscribe your vision as would a Symbol – which she is.[19]

Undoubtedly Fuller would have been somewhat confused by these terms of appreciation, although she managed in her own comments to translate the enthusiasm she inspired among the artistic avant-garde into a somewhat simpler form of aesthetic idealism, and she strongly affirmed the belief that dance was more expressive than language. But if Fuller's critical vocabulary was unsophisticated, this does not indicate that her effect on the (chiefly male) artists of the Parisian avant-garde was unwitting or her innovations minor. Fuller may have fulfilled Mallarmé's dream of a perfect art form through dance, but she did it by forcing an encounter with two elements deeply problematic within the *fin de siècle* aesthetics: first, the advent of modernity bringing both technology and the masses; second, the ambivalent idealization of sexuality and femininity. Symbolist aesthetics seemed primarily to take an anti-modernist stance and retreat in horror from the vulgarity of technology and commercial mass taste. In its treatment of sexuality and especially the sexuality of women, the

Symbolists simultaneously strove to idealize the erotic as an image of artistic creation, but also acknowledged sexuality as the source of inspiration in a balancing act that Fuller's deft manipulation of veils seems destined to allegorize.

Fuller's standing with the Symbolist critics had its ups and downs. Jean Lorrain, a true Fuller enthusiast, had described her dance in Symbolist terms in 1894:

> Within a sea of shadows, an indistinct form, floating as if a phantom, and then suddenly a ray of light, a spectral apparition: woman or flower? Who can tell? She has shot out from the darkness, such orange glimmer, so subtle and so unexpected in her magic blossoming, that one instinctively closes one's eyes. Oh! This woman wrapped within a whirlwind of light and veils which she twists, coming and going, vanishing and disappearing like a pale mist in order to reappear suddenly and flame brightly with the uncanny charm of an evocation.[20]

But a few years later Lorrain piteously savaged her Salomé, claiming she manipulated her veils 'like a laundress misusing her paddle' and characterized her performance as 'luminous without grace, with the gestures of an English boxer and physique of Mr. Oscar Wilde.' He declared, 'this is a Salomé for Yankee drunkards.'[21] Huysmans pronounced her shows 'strange,' summing them up: 'Mediocre dancing. After all, the glory goes to the electrician. It's American.'[22] Fuller's association with technology and democracy repelled Huysmans, but sharpened Mallarmé's fascination as he pronounced that Fuller's innovation lay precisely in what he termed 'an intoxication of art and simultaneously an industrial achievement.'[23]

If, as Huysmans claimed, the glory belonged to the electrician – that is, the creator of Fuller's lighting effects – Fuller's glorification rests secure. While both enthusiasts and detractors agreed Fuller was not a skilled dancer in the traditional sense, her understanding, control, and innovation in stage lighting was beyond dispute. She arranged dozens of mobile magic lanterns with circular gels containing various colors that shone on her from a variety of angles, creating a range of color harmonies that succeeded each other on this animated dancing screen. Further, from Salomé on, she devised a glass floor within the stage upon which she danced, illuminated from below. For some dances she employed hundreds of feet of material manipulated with wands that extended as far as ten feet from her body. In addition to the hues, the magic lanterns sometimes projected images onto Fuller and her extensions: stars, moons, and flowers. Other dances employed mirrors to multiply her image or placed a pane of glass between Fuller and the audience to create additional effects of reflections. After getting to know Marie and Pierre Curie, Fuller introduced a 'radium dance,' applying fluorescent chemicals to her costumes that glowed like the newly discovered, energy-releasing element.

Fuller's originality and genius lay in synthesizing and improving the highly visual spectacular effects of the turn of the century that almost immediately used new technologies for entertainment purposes. Fuller blended the techniques of electrical ballets or illuminated fountains with a new taste for a spectacle composed of gradual transitions and organic motion. In addition to Symbolism, Fuller's dances have long been associated with Symbolism's more popular and commercial cousin, Art Noveau, for which Fuller's art of motion served as much as an inspiration as an example. As Lista phrases it, 'it is less a question of an influence of one on the other or vice versa, than of a convergence.'[24] As Klaus-Jurgen Sembach has pointed out, the origin of both Art Nouveau and motion pictures in the 1890s underscores their shared concerns with motion and expressiveness, both deriving from the production possibilities of the new industrial age and both needing large scale popularity to succeed.[25] The Exposition of 1900 in Paris canonized the new style and also celebrated the motion picture with the Lumière Cinématographe Geant.[26] Fuller had her own theater within the Exposition, her dancing figure as much a symbol of the modern style of the new century as the Palace of Electricity or the statue of La Parisienne atop the monumental gate. One journalist, in fact, suggested a statue of Fuller illuminated by changing colored lights would have been preferable as the symbol chosen to top the gate and represent the Exposition.[27]

If popularity and mass production separate the Symbolists from Art Noveau, the art of Loïe Fuller defied the elitism of the aesthetes that claimed her as an ideal. While draping herself in the mantle of high art, Fuller nonetheless saw popularity as an indication of the essential expressiveness of her modern form of dancing. When asked during an American tour in 1910 if she minded playing vaudeville theaters where she shared the bill with aerialists and knock-about comedians and performed for an audience of 'delicatessen dealers from Seventh Avenue,' she responded:

> The Delicatessen man is indeed more likely than the educated man to grasp the meaning of my dances. He *feels* them. It is a question of temperament more than culture. My magnetism goes out over the footlights and seizes him so that he *must* understand – in spite of his delicatessen.[28]

In his 1897 novel *Le Soliel des morts* Symbolist (and Fuller enthusiast) Camille Mauclair created a character based on Fuller who articulates this same desire for an art that can reach the masses and specifically rejects the Symbolist doctrine of elitism and obscurity:

> I do not want to box myself within an incomprehensible and deserted art. The beauty I seek can be offered to everybody, this art of lines and shapes is accessible from the first view, why shouldn't I reveal myself through it?[29]

Thus we find articulated a truly utopian vision of a modern art form, highly technological, not only depending on the new energy of electricity, but seeming to visualize this invisible energy, through its use of colored light and the shifting polymorphism of the dance itself. Its basis was abstract and non-representational, evoking rather than portraying images and forms, and making each manifestation or shape dissolve harmoniously into another. This new abstract art of motion possessed an almost hypnotic power of fascination magnetizing or electrifying all who saw it.[30] Rather than a barrier to reception, its abstraction possessed an immediate sensual attraction that cut across classes and required no previous training or initiation to appreciate. While this confluence of sensual and psychological effects relates Fuller to both Symbolism and Art Nouveau, it also articulates the utopian expectations of the new art of motion pictures, sensed at its origin and articulated further by the avant-garde in the teens and twenties.

But one would be blind not to note the strong sexuality of this sensual appeal and its heavily gendered form of attraction. One is immediately struck by the contrast between Fuller's rather pudgy (Wildean, as Lorrain put it) body and the highly eroticized body portrayed in many of her publicity posters. Equally striking is the indication in many of these posters that Fuller danced nude beneath her veils, converting her Serpentine into a more traditionally erotic dance of the seven veils. This visual appeal in the posters seemingly contrasts with the recurring discourse of an ethereal, dematerialized body, which dominates most descriptions of her dance. Mauclair described the performance of his Fuller-based character as a 'cloud constantly changing with the rhythm of an invisible body.'[31] Other French critics wrote of Fuller during her early Parisian seasons, 'She is an apparition, not a woman of flesh and blood,' recalling the comments of the first New York reviews of the Serpentine.[32]

Clearly, a large part of Fuller's fascination, her magnetism, lay in this simultaneous bewitching and confounding of the male gaze, the rhythm of hide and seek, the promise offered by glimpses of a withheld body and its sublimation into pure form and energy. One review of her first Parisian season caught the dialectic of this metaphysical striptease: 'the impalpable, intangible, ethereal, supernatural essence that arises from the floating of the soft material, from the quick glimpses of pink flesh, from the dazzling magic of the colored lights – a voluptuous poetry.'[33] Fuller's art partakes of another dialectic of modernism, the encounter between the male gaze and the female body within a crisis of representation lodged midway between pornography and sublimation. The role of Fuller's female body was multiple and as unstable and even contradictory as anything else about her dance: a hidden yet evident source of rhythm, an imagined attraction glimpsed through veils, the active manipulator of the fabric, and a site for the projection of images and colors – a screen manifesting

otherwise immaterial visual delights. In her discussion of the wizard Edison's creation of a female android in Villiers de l'Isle Adam's novel *The Eve of the Future,* Annette Michelson seems to describe this unstable, baseless fabric of masculine projections when she invokes the female body in the cinema, 'not as the mere object of a cinematic *iconography* of repression and desire ... but rather as the fantasmatic ground of cinema itself.'[34]

Until the animated films of Emile Cohl (deriving, as Donald Crafton has shown, from the Spirit of Montmarte at the turn of the century, which embraced both Fuller and the Symbolists[35]), Fuller provides the most complex example of a technological art of motion, which certain film theorists will refine later within the avant-grade tradition, from the experiments of Futurist Prampolini through the work of Léger and the Soviet montage theorists, and which Deleuze locates more broadly in the pre-War cinema. As Lista says, 'the cinema uniquely was able to equal, very much later, the effects of dematerialization and mobility of the image sought by Loïe.'[36] But Lista's claim that the cinema followed 'much later' must be modified. Fuller's art of motion only slightly anticipated the pure joy in motion of much of the early cinema of attractions, which Germaine Dulac, writing in the twenties, would look back on as the original energy of the cinema that decades of narrative adaptations had obscured.[37] Dulac also recalled from her earliest memories her first vision of Fuller's art, and declared, 'that also was cinema, the play of light and of colors in relief and in movement.' She added, 'Loïe Fuller created her first color harmonies at the moment that the Lumière Brothers gave us the cinema.'[38] It is precisely early cinema as an art of motion that Dulac recalls for us: the breeze rustling the leaves in the trees in the first Lumière films, the pounding of surf in Paul's Rough Seas at Dover, the changing landscapes shown in the hundreds of phantom rides or Hale Tours films shot from trains and other moving vehicles – examples of the fascination in motion itself that Fuller exploited in a more abstract form. But besides the exploration of motion in early actuality filmmaking, the dominance of magical and illogical transformations over narrative in the trick films of Méliès and Pathé – as objects, people, and animals interchange identity and forms promiscuously – exhibits the syntax of Fuller's constant metamorphoses out of a matrix of movement.

But movement alone does not exhaust Fuller's direct relation to the cinema. Fuller and other precursors like Reynaud created the cinema before cinematography by wedding movement to light. Fuller's art relied on light in several fundamental ways. At the turn of the century the long tradition of a lit auditorium, signaling that being seen at the theater was as important as seeing a play, was challenged on several fronts: in the highly ritualized darkness of the Wagnerian performances at Bayreuth, the naturalist performances of Antoine, and the projection of motion pictures. Fuller's performances must be added to this

assortment of the would-be sacral and the admittedly profane, a reviewer of her 1901 New York tour commenting:

> Miss Fuller's performance is given in a darkened house, and a conspicuous feature of the entertainment is the lighting of matches held by belated latecomers in order to find the seats assigned to them.[39]

Darkness also served Fuller on stage, with each tableau separated by periods of darkness into which her images disappeared or from which they emerged. But light not only overcame (or surrendered to) darkness in Fuller's dance; more importantly, it cloaked itself in colors that supplied the most immaterial of covering for Fuller's form, staining her fabrics in a constant transit and transformation of hue. The posters designed for Fuller's publicity, or even more the series of prints designed by Toulouse-Lautrec to capture the spectrum of Fuller's effects, clearly show the inspiration such a spectacle must have provided for an abstract art of pure form and color endowed with an appearance of mutability. More directly, Fuller's color symphonies provided the cinema with its first impulse towards color. Early films of Serpentine dances demanded tinting of some sort. The direct application of tints to the film stock, illuminated as they would be by the projector beam, provided a brilliant equivalent. Both Edison and Lumière hand-tinted their Serpentine films, and the changing patterns of free-form color, as opposed to the attempt at color consistency and subordination to photographic form that characterizes most tinted films, make these first color films perhaps the most satisfying instances of the art of motion in early cinema.

But in relating early cinema to the art of Loïe Fuller, are we doing more than simply following, like Mallarmé's poetry, the crest and flux of distant analogies? What does the nearly simultaneous appearance of the Serpentine and the motion picture really tell us, other than that a certain popular fashion in dance spectacle was filmed frequently, as many other forms of dance were, in cinema's first decade? Is my claim for an art of motion as a tradition in cinema more than a tautology? If Henri Bergson can supply a new insight into the nature of cinema, as Deleuze proposes, I would claim Bergson's relevance should not be divorced from the historic horizon of expectation at the turn of the century, which occasioned a new understanding of motion. Bergson proposed the static filmstrip, or the chronophotographs of Etienne Jules Marey, in which motion is parsed and frozen into a linear series, as a model for the traditional, but mistaken, view of time and motion, which he hoped to overcome. One would be hard put to conceive of a better image of Bergson's contrasting, new, dynamic understanding of duration than the dances of Loïe Fuller.

'In reality,' Bergson claimed (meaning in a reality not confined by our knowledge or practical habits of perception), 'the body is changing form at

every moment; or rather there is no form, since form is immobile and the reality is movement. What is real is the *change of* form: *form is only a snapshot view of a transition*.'[40] If form is a snapshot of a transition, Fuller's dance, as the art of motion, seemed to offer forms dissolved by cinema. Bergson, of course, seemed to condemn the cinema by using it as a model for the mistaken view of time and motion; but, if nothing else, Deleuze has shown that this choice illustration does not cancel out the deep affinity between cinema and Bergson's ideas of motion.[41] In his example of the 'cinematographical' character of the traditional mode of thought, which sees movement as simply a quality added to entities, he imagines a film of a regiment of soldiers marching.[42] This image of the *defilement* of disciplined male bodies marching past the camera in cadence not only recalls the many actualities of military parades, but also the chronophotographic imagery of Marey, and in addition recalls one of the motives for his research, the creation of a more physically perfect soldier after France's defeat in the war with Prussia.[43] But if, instead, we imagine one of the many early films of the Serpentine, hand-tinted with a shifting phantasmagoria of color, we can see the realization of Bergson's concept in cinema – in the image and art of motion.

A version of this essay was presented at the sixth Domtior conference in Udien, Italy, as well as in lectures at the Guggenheim Museum, The University of California Berkeley, and Stanford University. I would like to thank Nel Andrew for her help in researching Fuller.

Notes

1. Roman Jakobson, 'Dialogue on Time in Language and Literature,' in *Verbal Art, Verbal Sign, Verbal Time*, ed. Krystyna Pomorska and Stephen Rudy (Minneapolis: University of Minnesota Press, 1985), p. 12.
2. Gilles Deleuze, *Cinema I: The Movement-Image,* trans. Hugh Tomlinson and Barbara Habberjam (Minneapolis: University of Minnesota Press, 1986), especially pp. 1-12 and 56-70.
3. Umberto Boccioni, Carlo Carra, Luigi Russolo, and Giamcomo Severini, 'Futurist Painting: Technical Manifesto,' in *Futurist Manifestos*, ed. Umbro Apollonio; *The Documents of Twentieth-Century Art,* trans. Robert Brain, R. W. Flint, J. C. Higgitt, and Caroline Tinsdall (New York: Viking Press, 1973), pp. 27-28.
4. F. T. Marinetti, 'The Manifesto of Futurism,' in ibid., p. 21. I must add here, a bit proleptically, that while they scorned the Symbolists, the Futurists continued to embrace Loïe Fuller. See the remarks of Enrico Prampolini quoted in Giovanni

Lista, *Loïe Fuller, Danseuse de la Belle Époque* (Paris: Stock Somogy édition d'Art, 1994), p. 25.

5. Frank Kermode, *Romantic Image* (New York: Vintage Books, 1957), p. 85.
6. F. T. Marinetti, Bruno Corra, Emilio Settimelli, Arnoldo Ginna, Giacomo Balla, and Remo Chiti, 'The Futurist Cinema 1916,' in *Futurist Manifestos*, p. 207.
7. For a discussion of the relation between the early Lumière films and the culture of amateur photography, see my essay 'New Thresholds of Vision: Instantaneous Photography and the Early Cinema of the Lumière Company,' in *Impossible Presence: Surface and Screen in the Photogenie Era*, vol. 2, ed. Terry Smith (Sidney, Australia: Powers Publications, 2001).
8. Charles Musser, *Edison Motion Pictures 1890-1900: An Annotated Filmography* (Washington, D.C.: Smithsonian Institution Press, 1997), pp. 49, 116, 139, 339, 427.
9. C. W. Ceram, *Archeology of the Cinema*, trans. Richard Winston (New York: Harcourt Brace & World, n.d.), p. 172.
10. Michele Albert and Jean-Claude Seguin, *La Production cinématographique des Frères Lumière* (Paris: Bibliotheque du Film, 1996), p. 324.
11. See Loïe Fuller, *Fifteen Years of a Dancer's Life with Some Account of Her Distinguished Friends* (London: Herbert Jenkins, 1913); Giovanni Lista, *Loïe Fuller, Danseuse de la Belle Époque* (Paris: Stock Somogy édition d'Art, 1994); Richard Nelson Current and Marcia Ewing Current, *Loïe Fuller: Goddess of Light* (Boston: Northeastern University Press, 1997); Frank Kermode, 'Poet and Dancer before Diaghilev,' *Partisan Review* XXVIII, no. 1 (Jan.-Feb., 1961), pp. 48-75; Sally R. Sommer, 'Loïe Fuller,' *Drama Review* (March, 1975), pp. 53-67; and Rhonda K. Garelik, *Rising Star: Dandyism, Gender, and Performance in the Fin de Siècle* (Princeton, N.J.: Princeton University Press, 1998), pp. 99-127.
12. Quoted in Current, *Loïe Fuller*, p. 35.
13. See Current, p. 43.
14. J. K. Huysmans, *Against the Grain* (New York: Dover Publications, 1969), pp. 182-83.
15. Ibid., pp. 183-84.
16. Stéphane Mallarmé, 'Les Fonds dans le ballet (d'apres une indication récente),' in *Oeuvres complètes*, ed. Henri Mondor and Jean-Aubry (Paris: Gallimard, 1945), pp. 307-9.
17. Julia Kristeva, *Revolution in Poetic Language*, trans. Margaret Waller (New York: Columbia University Press, 1984), p. 29.
18. Mallarmé, 'Ballets,' in *Mallarme: Selected Prose Poems, Essays and Letters*, trans. Bradford Cook (Baltimore: Johns Hopkins Press, 1956), p. 62.
19. Ibid., p. 66.
20. Quoted in Lista, pp. 199-200.
21. Quoted in ibid., pp. 229-230.
22. Quoted in Current, p. 54.
23. Mallarmé, 'Les Fonds dans le ballet,' p. 307.
24. Lista, p. 282. See, however, Rhonda K. Garelik's interesting claim that Fuller is more modernist than Art Noveau, *Rising Star*, pp. 122-23. Garelik may, however, underestimate the technological and commercial aspect of the movement.
25. Klaus-Jürge Sembach, *Art Nouveau: Utopia: Reconciling the Irreconcilable* (Köln; New York: Taschen, 1999).

26. For an account of cinema at the 1900 exposition, see Emmanuelle Toulet, 'Cinema at the Universal Exposition, Paris, 1900,' in *Persistence of Vision* 9 (1991), pp. 10-36.
27. Lista, pp. 327-28.
28. Fuller quoted in Current, p. 204.
29. Quoted in Richard Candida Smith, *Mallarmé's Children: Symbolism and the Renewal of Experience* (Berkeley: University of California Press, 1999), p. 70.
30. In fact, when Fuller premiered the Serpentine she was portraying a woman who had been hypnotized. As Lista points out, Fuller was raised within a spiritualist family and mesmerism and mediumistic phenomena are a key inspiration for her art. Lista, pp. 75, 44, and passim.
31. Candida Smith, *Mallarmé's Children*, p. 70.
32. Quoted in Current, p. 62.
33. Quoted in Current, p. 52.
34. Annette Michelson, 'On the Eve of the Future: The Reasonable Facsimile and the Philosophical Toy,' *October* 29 (1984), p. 19.
35. Donald Crafton, *Emile Cohl, Caricature, and Film* (Princeton, N.J.: Princeton University Press, 1990), especially pp. 9-81. Cohl in fact drew a caricature of Fuller entitled 'L'Oie Fuller,' punning on that aspect of her name which caused her to add the umlaut in France. See Lista, p. 169.
36. Lista, p. 259.
37. Germaine Dulac, 'Aesthetics, Obstacles, Integral *Cinégraphie*,' trans. Stuart Liebman in *French Film Theory and Criticism: A History/Anthology 1907-1939*, vol. I 1907-1929, ed. Richard Abel (Princeton, N.J.: Princeton University Press, 1988), pp. 390-91.
38. Germaine Dulac, '*Trois rencontres avec Loïe Fuller,*' in *Ecrits sur le Cinéma (1919-1937),* ed. Prosper Hillairet (Paris: Paris Experimental, 1994), p. 108. I thank Kenneth Crab of NYU for drawing my attention to this essay.
39. Quoted in Current, p. 146; see in Lista a cartoon from Fuller's American tour of 1896 showing an audience member having to light a match to find his seat during Fuller's performance, p. 239.
40. Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (Boston: University Press of America, 1983), p. 302.
41. Deleuze, pp. 3- 11.
42. Bergson, p. 304-5.
43. See Marta Braun, *Picturing Time: The Work of Etienne-Jules Marey (1830-1904)* (Chicago: University of Chicago Press, 1992), especially pp. 68-73.

Visitings of Awful Promise

The Cinema Seen from Etna

Stuart Liebman

Sometime during late June 1923, in a hotel in Catania, Sicily, the 26-year-old French filmmaker and film theorist Jean Epstein rang for the elevator to the lobby seven floors below. He had come to Sicily to shoot Mt. Etna's eruption for his fifth film, the documentary La Montagne Infidèle, now unfortunately lost.[1] The plaintive cries of the night concierge trapped between floors in the elevator cabin gave notice that he would need to use the stairs, and Epstein began to walk down a spiral staircase lined with mirrors, what the French call a *miroir à vis*. He would later recount his descent in one of his most striking, though still insufficiently appreciated, speculative texts, 'Le Regard du verre' ('The Mirror's Gaze'). 'This immense spiral of stairs,' he wrote, 'portended vertigo':

> The entire shaft was lined with mirrors. I descended surrounded by many selves, by reflections, by images of my gestures, by cinematic projections. At every turn I was caught from another angle. There are as many different and independent positions between a profile and a three-quarter view as there are tears in an eye. Each of these images lived but an instant, no sooner caught sight of than lost from view, already something else. Only my memory could hold on to one of their infinite number, and by doing so, missed two of every three. A third of the images gave birth to secondary images. An algebra and descriptive geometry of gestures came to light. Certain movements were divided over and over; others were multiplied. I tilted my head and to my right I saw only the square root of a gesture, but to the left, this gesture was raised to the eighth power. Looking at one, then the other, I acquired a different conception of my three-dimensionality. Parallel perceptions accorded perfectly with each other, reverberated against each other, reinforced each other, and then were extinguished, like an echo, but with a speed far greater than acoustical ones. Tiny gestures became very large ... This staircase was the eye of another sort of tyrant and an even greater spy. I descended as if moving across the optical facets of an immense insect. The opposing angles of other images cut across and amputated each other; reductive and fragmentary, they humiliated me.[2]

His disorientation grows as he descends through the flux of evanescent images *en abyme*,[3] even as disturbing reflections on their implications gradually emerge:

> For it is the moral effect of such a spectacle that is so extraordinary. Every glance brings a baffling surprise that insults you. I had never been seen this way before and I regarded myself with horror. I understood those dogs that bark and the apes that fly into a rage in front of a mirror. I thought myself to be one way, and perceiving myself to be something else shattered all the vain notions I had acquired. Each of these mirrors presented me with a perverse view of myself, an inaccurate image of the hopes I had. These spectating mirrors forced me to see myself with their indifference, their truth. I seemed to be in a huge retina lacking a conscience, with no moral sense, and seven stories high. I saw myself stripped of my sustaining illusions, surprised, laid bare, uprooted unfeelingly and presented truthfully, exactly for what I was. I would have run a long way to escape this spiraling movement in which I seemed thrust toward a hideous center of myself. Such a lesson in egotism in reverse is pitiless. An education, an entire course of instruction, a religion had patiently consoled me to be as I was. Everything had to be begun anew.[4]

More than an account of a curious autobiographical episode is at stake in these passages. What begins as an accidental encounter with mirrors gone awry quickly becomes a meditation on the self and the body, on seeing and blindness, on vanity and truth. Epstein's vision is confounded, unable to hold on to familiar and controllable representations of the external world, indeed, of his own body. To borrow a phrase Jacques Lacan later developed, Epstein astoundingly loses the 'orthopedic' awareness of his totality; it is as if he undergoes the 'mirror stage' in reverse.[5] He reports that he feels devalued, degraded in the direction of nothingness. But his description of the *miroir à vis* also signals that we are also to understand the passage as something more: it is a meditation on the cinema. The site itself, whose mirrored fragments yield a dazzling shower of images, is clearly a proto-cinematic device producing a profusion of effects, ranging from close-ups and slow motion to superimposition. 'Even more than this kind of play with tilted mirrors,' Epstein observes, 'the cinema produces similarly unexpected encounters with oneself.'[6] Indeed, in these passages he begins to conceive of cinema, the nature of its images, and their consequences for the spectator in ways that are unprecedented in contemporary reflections on the new art form; all, moreover, are crucially linked to issues of corporeal identity and psychological integrity in ways and to an extent that had not been the case in his earlier writings on film. By amplifying and complicating his remarks about the essence of cinema – what he, following Louis Delluc, called *photogénie* – Epstein sketched the foundations of a unique epistemology and ontology of film.[7]

That Epstein's ambition was to articulate a theory of his medium is confirmed by the fact that he elaborated upon the insights opened for him on the *miroir à vis* in an expanded version of the essay published in 1926 as the eponymous title piece of his second published volume of writings on film, *Le Cinématographe Vu de l'Etna*.[8] In this enlarged version, certainly one of the grandest, most complex, elegant, and tantalizing essays ever written about cinema during the entire silent period, 'Le Regard du Verre' became the *second* part of the latter text. In the first section, Epstein recounts the difficult ascent of Mt. Etna with his team, which occurred two days *after* his descent through the mirrored staircase. Once again, even amid the difficult physical challenges posed by the volcano's titanic and disorienting spectacle, he reports that his mind remained haunted by the cinema. He felt as if he were in a film:

> We felt ourselves to be in the presence of someone lying in wait for us ... We marched along silently, so sharing a single thought that I felt it in front of us like an eleventh gigantic person. I don't know if I can make myself understood, but the figure with whom we were all preoccupied was the cinema.[9]

That thoughts of cinema should be provoked in such circumstances, that the two main episodes should be so linked, the imagery of his text so extravagant, its language so densely metaphorical and its narrative structure intriguingly coiled – is not accidental. In fact, they constitute gestures of affiliation to a particular European discourse, that surrounding early Romantic meditations on the sublime and the Imagination, even as we can observe how his essay significantly recast its familiar themes and strategies. His indebtedness to this tradition must be unpacked if we are to understand Epstein's sense of his vocation as a filmmaker and to situate his highly individual film theory within the European cinematic avant-garde of the twenties.

Epstein's essay was provoked by the ongoing discussions about cinema and its theorization in France that had intensified over the prior decade. The immediate cause was the diffusion of a number of now-famous animated and non-narrative short films made in Europe since the beginning of the 1920s, including Hans Richter's Rythmus 21 (1921), Fernand Léger's Ballet Mécanique (1924), Viking Eggeling's Symphonie Diagonale (1924/5), and Henri Chomette's Reflets de Lumière et de Vitesse (1925), among others. Their programmatic abandonment of stories and acting in favor of forms based exclusively on the rhythmic movement of abstract visual shapes challenged the hegemony of narrative models for cinema. Some painters, poets and vanguard critics had fervently endorsed such initiatives while, predictably, film industry representatives routinely dismissed them. In part to fan the controversy, in 1925 the Théâtre du Vieux Colombier, the leading Parisian avant-garde film center, sponsored two important series of screenings and lec-

tures that started a debate about the meaning and value of such films. Over the next two years, many leading cineastes concerned with the aesthetic problems and prospects of avant-garde cinema contributed to the discussions, which revolved around the charged concept of 'pure cinema,' a slogan carefully chosen by its partisans – the filmmakers Henri Chomette and Germaine Dulac and the prominent critic Pierre Porte, among others – to take the intellectual high ground in the ensuing polemics. The major premises behind the claims they made for 'le cinéma pur' were variations on premises and prescriptions derived from wider discussions of modernism in the arts. Like any distinctive modern art form, they believed, film should not depend for its essential structure and effects on strategies derived from other arts. Because graphic shapes of light in rhythmic movement were, it was claimed, the essence of cinema, all other features commonly associated with films – story, performance, even representational imagery – were superfluous, even harmful, to the youngest art.[10]

Such prescriptive conclusions provoked predictable, if surprisingly measured responses from the successful commercial director Henri Fescourt and the scriptwriter Jean-Louis Bouquet, who argued that narratives had to remain the basis for films. The opposing positions were defined, then refined in several dozen articles and books. The publication of the only number of Dulac's journal *Schémas* in February 1927 brought the controversy to a climax, though occasional articles about the topic were published and a number of new shorts were produced until the end of the silent period.[11]

A special issue of the prestigious journal *Les Cahiers du Mois* devoted to cinema was published to accompany the Vieux Colombier series. Epstein, then at the apogee of his influence and prestige as a theorist after the deaths of Louis Delluc and Ricciotto Canudo, was asked to write the lead essay, which became 'Le Regard du Verre'.[12] The commitment of the maker of the celebrated *fête foraine* sequence in Coeur Fidèle (1923) to formal innovation could hardly have permitted him to adopt the banal industry positions that insisted upon the necessary centrality of stories.[13] Moreover, he had long been on record as endorsing an essentially modernist critical paradigm that differentiated art forms by means of the modalities of consciousness proper to each. 'Every art erects its forbidden city,' he had remarked in a public lecture given repeatedly over the prior two years:

> ... its own exclusive, autonomous and specific domain hostile to all that is not its own. It is perhaps quite astonishing to say this, but literature should above all be literary; the theater, theatrical; painting, painterly; and the cinema, cinematic.[14]

And from the outset of his career as a film theorist in 1921, he seemed to have unequivocally located the essence of cinema in its concentration on, and novel articulations of, visual forms – what he referred to in shorthand as 'the optical.'

'Never has there been an emotional process as homogeneous, as exclusively optical as the cinema. Truly, the cinema creates *a special state of consciousness limited to a single sense*.'[15]

Yet in 'The Mirror's Gaze,' the first of several important texts he wrote over the next six months that addressed the issue of cinematic purity with varying degrees of directness, he bluntly dismissed the claims made on behalf of pure cinema by those one would have thought to be his natural allies. 'Symphonies of movement have come into fashion too late,' he wrote, and he added, 'they are now very boring.'[16] Shortly thereafter, he attacked 'the absolute film' even more trenchantly:

> If this abstract cinema enchants anyone, let them buy a kaleidoscope, that toy of second childhood, and attach a device that will generate regular, but varying, rotating movements. As for me, I believe the age of the cinema-kaleidoscope has passed.[17]

This surprisingly emphatic rejection highlights the vehemence with which he took issue with the advocates of pure cinema.[18] One might have inferred as much from his dazzling description of the mirrored staircase, a kind of kaleidoscope-gone-mad. Clearly, he believed that much more was at stake in the experience of cinema than an entertaining play of moving shapes. Behind his caustic rhetoric one can discern his fundamental disagreements with pure cinema's pretensions to mastery and control of film images, pretensions that, in Epstein's view, were rooted in a crucial lack of comprehension of the mechanism and form of representation unique to film. As important, he objected to the privileging of sight at the expense of a more viscerally engaged spectator. The dramatic description of his own experience on the stairs conveys a disconcerting image of a subject whose gaze is confounded to the point of blindness by the imagery generated through the camera's implacable stare. In the gap that opens between percept and concept, sight is diminished even as it is rooted anew in the affective, erotic ground of the viewer's convulsed body.

Even the most casual reader of the passages I have quoted thus far will observe that in *Le Cinématographe Vu de l'Etna*, as in much of his best writing on film, Epstein's theoretical observations are not simply stated as propositions and then rigorously developed. As nearly all commentators on his theory have noted, Epstein is hardly a systematic thinker. He regarded theory not as a kind of quasi-scientific enterprise, but as a speculative instrument that allowed new perspectives and novel domains of meaning to emerge.[19] Nevertheless, he *does* make theoretical claims in 'Etna,' although they are formulated more subtly and elusively than in many of his other texts. Subsumed in striking literary strategies, embedded in the narrative, caught up in a complex web of allusions and, indeed, even fused with the language in which Epstein expresses his in-

sights, they must be unpacked before their significance for his theory of cinema can become clear.

The two linked episodes Epstein tells in 'Etna' provide an important initial clue. Reversing the two principal sections of Epstein's text restores chronology and highlights an overarching pattern of represented movement – first down the mirrored stairs, then up the volcano – which recapitulate a narrative pattern familiar from several famous Romantic poems, of which Wordsworth's *The Prelude* is perhaps the most eminent example. These poems recount stories of artistic vocation as they track a quasi-spiritual journey toward a revelation, through an encounter with a sublime landscape, of the nature of the Imagination and the foundations of art.

The dramatic settings of each of 'Etna's' major episodes – the heights of one of Europe's most emphatically unstable mountains, linked since antiquity to the legendary Greek philosopher Empedocles's self-immolation,[20] and the bewildering *miroir à vis* – also resonate with allusions to this poetic tradition. The seemingly infinite mirrored facets of the staircase, for example, refigure that anxious encounter with disconcerting multiplicity or magnitude which Kant, in *The Critique of Judgement*, made the defining criterion of the 'mathematical sublime.'[21] Encountering vast horizons – a desert or the starry heavens, for example – dramatically demonstrates the limits of human perception, and the awareness of such limits in turn produces, at least initially, acute anxiety in the beholder. The mirrored staircase is just such a dazzlingly 'mathematical' figure whose description, replete with allusions to mathematics and geometry, powerfully underscores Epstein's report of the crisis – so typical of his Romantic precursors[22] – into which his vision, and with it his very sense of self, was thrown.

Some of this anxious dread is carried over as the scene shifts to the slopes of Mt. Etna. Here the subject's – that is, the fictional narrator Epstein's – anxiety is motivated by a landscape Kant classified as 'dynamically sublime': an erupting volcano. Epstein's powerful depiction of demonically unleashed nature echoes a rich heritage of literary precedents. Like the hero of Letter XXIII in Rousseau's *La Nouvelle Héloise* (Part I) and the poets in Book VI of Wordsworth's *The Prelude* and Hölderlin's poem '*Heimkunft*,'[23] Epstein moves from a world of paralyzing self-consciousness and disarray on the hotel staircase through a landscape which, in Rousseau's words, 'seems to take pleasure in self-opposition':[24]

> The conflagration had covered everything with the same colorless color, grey, dull, dead. In front of one's very eyes, every leaf on every tree passed through all the colors of autumn until, cracked, twisted and scorched, they fell into the fiery blasts. And each naked, blackened tree held itself upright for but an instant during this scorching winter. There were no more birds, no insects at all. The earth, lined with

> thin crevices, was continually traversed by tremors. The lava collapsed with the noise of a million plates breaking at once. Pockets of gas burst, hissing as softly as snakes. The inferno's smell, an odor without scent, filled with tingling, acrid sensations, poisoned our lungs to their very depths. Under the sky, pallid and parched, death truly reigned ... Two hundred meters away, fiery rapids surged from an almost circular crevice and rushed down the slope to form a river as red as ripe cherries and as large as the Seine at Rouen. The vapor covered the sky with a porcelain whiteness. Little gusts of fetid, angry wind raised eddies of ash that fluttered just above the ground, curious seagulls living at the edge of the gigantic conflagration ... Where we were the noise was that of a hundred express trains scorching past a metal viaduct. After a few minutes, the roaring became like silence, propitious to the imagination. And all about us lay ashes.[25]

In a way that recalls Wordsworth's celebrated description of the Simplon Pass or Hölderlin's account of his return to Swabia, the passage just quoted at length characteristically uses the trope of oxymoron to unite opposites, as well as catachresis or mixed and exotic metaphors to evoke the even more far-reaching, vast disorder – that is to say, the sublimity – of Etna's tortured landscape. Radical contradictions and inconsistencies abound. Categories are confounded, as the entire continuum of substance becomes meaningful in new terms. Note Epstein's observations: odors have no scent; colors are colorless; noise becomes silence; the ground becomes unstable and as insubstantial as ashes; flames are transmuted into the liquid stuff of rivers; the sky hardens into white porcelain. Cinders rain *up* to the level of the ground and gravity seems suspended. Time eerily moves at a frenetic pace: the seasons become blurred as Epstein reports watching living trees rapidly undergo the color changes of Autumn and then die, as if filmed in accelerated motion. The sterile area around the crater, moreover, demarcates a zone of regression. Men revert to childish impulse while the sane go mad. The active are reduced to a numbed passivity, and 'devils' in the person of an obsessed Swedish geologist haunt the space. Paul De Man's conclusion about early Romantic poems of the sublime also holds for Epstein's account of his experience on Mt. Etna: 'One feels everywhere the pressure of an inner tension at the core of all earthly objects, powerful enough to bring them to explosion.'[26] Or, quite precisely, to eruption.

Epstein's movement through these sublime landscapes in which extraordinary and seemingly impossible spectacles burst through the frames of normal perception and convention has significant implications for his conceptions of the nature of cinematic representation and spectatorship. According to Kant, one experiences the sublime (rather than dread) only if protected from the natural threat by the recognition of Reason's superiority to Nature.[27] However, in the midst of the unstable landscape, as earlier on the stairs, Epstein does *not* seek to identify with the higher power of a supersensible *ratio* capable of over-

coming the aporias of sense.[28] Instead, he revels in the solitary terrors and pleasures made available by the novel incarnation of the Imagination, the cinema. At no point, however, does he seek to identify with what he elsewhere calls the 'most beloved machine.' Figured hyperbolically as an inhuman 'tyrant's eye'[29] and a spy, the cinema is *valued* for the way it unrelentingly plunges the underpinnings of everyday existence into crisis. Through the cinema's destructive analytic gaze, the authority of the Cartesian *cogito*, a regular target of Epstein's criticism, is shattered.[30] Consciousness devolves into something unstable; an arbitrary and momentary selection conjured from a seeming infinity of splintered perspectives. Even the body, the material object *par excellence*, becomes fractured, elusive, and insubstantial, more an incoherent idea than a solid, delimited mass. As I noted earlier, it is as if Epstein stands the process of the 'mirror stage' on its head:

> The *mirror stage* is a drama whose internal thrust is precipitated from insufficiency to anticipation – and which manufactures for the subject, caught up in the lure of spatial identification, the succession of phantasies that extends from a fragmented body-image to a form of its totality that I shall call orthopedic – and, lastly, to the assumption of the armor of an alienating identity, which will mark with its rigid structure the subject's entire mental development.[31]

In front of the mirrors, he resists the lure of interpellation and relinquishes the embrace of the fantasized orthopedic body that, according to Lacan, constitutes the basis of the subject's subsequent development. Helping the subject to resist assuming 'the armor of an alienating identity' by initiating an 'egotism in reverse,' the cinematic Imaginary opens the possibility of pleasures every bit as great as its terrors.

For if his first impulse is like that of 'those little American millionaires who cried when seeing themselves on screen for the first time,'[32] Epstein, while stunned and disconcerted, is simultaneously fascinated by what he sees. If during the first half of Epstein's journey to the mountain the cinema acts almost diabolically[33] to dissolve the self, in the second half 'the hand that inflicts the wound is also the hand that heals it.'[34] I have already cited the relevant passage in which Epstein identifies the cinema as the presiding spirit of and wondrous guide for the climb up Mt. Etna. It is a novel incarnation of the Imagination – displaced from human faculties to an external, superhuman agency with powers almost as great as those of nature. Indeed, the cinema acts 'non-productively,' spewing forth images much like the exploding volcano does lava. The cinema – at least of the sublime kind Epstein imagines here – is devoted to pure expenditure in a sense not that far removed from ideas Georges Bataille was developing at almost the same time.[35]

But as he proceeds to the rim of the crater, Epstein's thoughts turn to one of his principal mentors, Ricciotto Canudo, whose creative energy and effusive passions are also hyperbolically figured as volcanic:[36]

> As we climbed on our mules' backs parallel to the lava flow toward the active crater, I thought of you, Canudo, who threw so much of your soul into things. You were the first, I think, to have sensed how the cinema unites all the kingdoms of nature into a single order, one possessing the most majestic vitality. It inscribes a bit of the divine in everything. In front of me, at Nancy, a room with three hundred people moaned when they saw a grain of wheat germinate on screen. Suddenly, the true visage of life and death, of a terrifying love, appeared, provoking these religious cries.[37]

Indeed, the effects produced by the volcano remind Epstein of entrancing visions of a more celestial, spiritualized Nature he has seen in films that held countless viewers in their thrall. In such films, 'grass in the meadow is a smiling, feminine genie. Anemones full of rhythm and personality evolve with the majesty of planets.'[38] Trees and stones gesticulate, jellyfish dance, and mountains signify. All these visions are created by the film camera, 'la plus aimée machine,' out of the raw material of nature. He begins to reflect on the purportedly unique properties of cinematic images – what he called their 'photogeneity' – which Canudo had been among the first to discern.[39] And this reflection yields a pregnant formula for the characteristics of the film image:

> To discover unexpectedly, as if for the first time, everything from a divine perspective, with its symbolic profile and vaster sense of analogy, suffused with an aura of personal identity, that is the great joy of cinema.[40]

Such formulas, which owe much to the eclectic mix of Baudelairean and Symbolist poetics Canudo espoused, lie at the heart of Epstein's theory of *photogénie*. Those who would dismiss such formulations simply as effusive pantheistic fervor ignore Epstein's admittedly elliptical, but nevertheless searching, analysis of the conditions and techniques of what he called 'photogenic' representation. As early as 1921 Epstein had referred to the film camera as a 'brain in metal.'[41] In 'Etna,' he reminded his readers once again of the central importance of the lens:

> The camera lens is an eye which Apollinaire has already called surreal (without any relationship to today's surrealism), an eye endowed with inhuman analytic properties. It is an eye without prejudices, without morals, exempt from influences. It sees features in faces and human movements which we, burdened with sympathies and antipathies, habits and thoughts, no longer know how to see. For those who consider this statement, however briefly, every comparison between theater and cinema becomes impossible. The very essence of these two modes of expression is different.[42]

The raw material of the world was 'distilled' through the lens, cleansing the represented objects of the haze of sympathies and antipathies that befogged ordinary perception. *Photogénie* did not depend on the lens alone, however. The camera's optical system was only part of a larger set of devices constituting a complex articulative process, something Epstein, the refined cinematic stylist, could hardly ignore. Once photographed, the object was inserted into a new relational logic of time and space coordinated by the frame, recording speed, editing, and other strategies to synthesize visual spectacles importantly – one might even say ontologically – different from their pro-filmic models. How they differ is important and instructive. The descriptions of photogenic images I have already cited distinguish photogenic representations by their resistance to the stabilization of their referents. What was crucial was a tension, an exacerbation between an object's literal and extended meanings, an oscillation, as Epstein phrased it, between its 'symbolic profile' and its 'vaster sense of analogy.'[43]

The effect could be produced by a variety of techniques. *Photogénie* seems to have been predicated on motion – either of the object or of the camera lens, weaving in relation to each other – so as to yield an imprecise and therefore suggestive description.[44] From Epstein's first theoretical writings onward, however, the close-up constituted a privileged instance of *photogénie*. Although additional techniques, such as slow motion, could augment the effect, proximity alone shifted the framing of objects and thereby momentarily suspended the identity of what was captured. As their hardened symbolic profiles dissolved, they ceased functioning as synecdoches of a larger whole to which they were subordinate. The autonomization of parts, moreover, accompanied a shift in meanings, which became radically labile as the referent floated in an unstable flux.[45] In 'Etna,' he provides several instructive illustrations:

> A hand is separated from a man, lives alone, suffers and rejoices alone. And the finger is separated from the hand. An entire life suddenly condenses and finds its most pointed expression in this fingernail that mechanically torments a thunder-charged fountain pen. There was a time not so long ago when hardly a single American drama was without a scene in which a revolver was slowly pulled out of a half-open drawer. I loved that revolver. It seemed the symbol of a thousand possibilities. All the desires and desperation that it represented, the multitude of combinations to which it was a key; all the endings, all the beginnings which it permitted us to imagine. All this endowed it with a kind of freedom and moral character. Is such freedom, such a soul, more epiphenomenal than the one we claim to be our own?[46]

In such a presentation, an object's place in a preexisting order of being or narrative is suspended. The image of the revolver vividly projects from the screen,

yet around it circulates an unstable semantic nimbus through which it is profoundly mortgaged to spectatorial desire and despair, to the past and future, to 'all the ends, all the beginnings which can be imagined.' Its literal meaning is quickly eclipsed and gives way to a radical polysemy pulsing alternative shapes and meanings through the shot's manifold of light and space and time.[47]

While Epstein consistently notes the pleasure of looking at such shots, he also acknowledges an uneasiness compounded of 'respect, fear and horror'[48] as he simultaneously descends 'vers un centre affreux de moi-même.' Such a descent is, indeed, a crucial feature of Epstein's theory of spectatorship, tied up as it is with the notions of 'fatigue' and 'le subconscient,' key concepts in Epstein's aesthetics.[49] 'Fatigued' by the strenuous pace and rush of modern urban life, the overwhelmed subject descends from a consciousness rooted, according to Epstein, in reason and calculation into the fundamentally irrational ebb and flow of images and sounds that make up the subconscious.[50] The 'awful promise' of photogenic images and sequences sustains the spectator's ambivalent *jouissance*, yielding a kind of unnerving but therapeutic release in an experience most akin to that of the sublime as Epstein comprehended it.

Epstein's description of the destabilized viewer gazing fascinatedly at the phantasmatic rush of sublimely unstable imagery on screen makes it clear that sublimation is not an appropriate model for the psychic processes he locates in aesthetic experience. One might say that Epstein's theory of spectatorship stands the idea of sublimation – in Freud's sense – on its head. The process of sublimation is a movement upward, so to speak, toward a calibrated compromise of unconscious impulse with reason leading to a necessary and socially useful deferral and attenuation of pleasure. He instead seems to posit a movement *downward* 'towards a hideous center' of oneself – that is, a kind of 'desublimation' – as constitutive of the experience of watching a film.

Consider once again the spectacle Epstein witnesses on Etna's fiery slopes: a stunning lava flow from the erupting crater accompanied by 'de petit coups de vent rageur et fétide' that punctuate the explosive emissions. The raptly attentive narrator seems to enjoy the extraordinary experience of a Nature astonishingly reverting to a cosmic anal phase in which the entire spectrum of matter, preeminently the lava itself, becomes vividly charged, but unformed 'matière primaire.'[51] Described in language that is amusingly explicit, the descent Epstein has in mind while watching a film appears to be a species of regression to the pre-Oedipal developmental period Freud and his colleagues called the 'anal phase.' It is in just such a regressed, 'aseptique' space, amid the thick drifts of soft ash covered by a heavenly vault the color of white porcelain – as if by a gigantic inverted toilet bowl – that Epstein, our surrogate spectator, finds it comfortable, indeed comforting, to lie down:

> The most careful surgeons prepare their operating rooms less antiseptically. I slept on the ashes which were warm and moving like the skin of a large animal ... The vapor covered the sky with a porcelain whiteness. Little gusts of fetid, angry wind raised eddies of ash which fluttered just above the ground, curious seagulls living at the edge of the gigantic conflagration. And all about us lay ashes.[52]

The warm mounds of malleable ash and cinders are 'propice à l'imagination.' Though limned with the threat of absorption and extinction, immersion in them is nevertheless intensely pleasurable as the spectator is treated to images (and sounds) whose meanings submit to the warp and woof of dissolution and retention that are fundamental to the 'anal phase.'[53] It is in just such a state of receptivity that Epstein, alone among the theorists in the silent period, posits the filmgoer.

The sublimely photogenic films of which Epstein dreamed in 'Etna' were to have facilitated just such a playful, regressive engagement with a world returned to primal shit via flickering figures of pre-Oedipal desire. That he never made such a radically transgressive film is both an obvious and a disappointing fact of film history. Perhaps the fiscal constraints imposed by Les Films Jean Epstein, his start-up independent production company, led him to an understandable caution. It is entirely possible, too, that he backed away from the strenuousness of the effort to create such films, or that he simply lacked the nerve. But his vision of such a cinema did not go unnoticed. It may very well have borne fruit in the work of another young filmmaker, whose work was supported through private largesse, and who was undaunted – perhaps even exhilarated – by the challenge of creating just such a desublimated cinema. That filmmaker was Epstein's former assistant, Luis Buñuel; his justly infamous and celebrated achievement is called L'Age d'or (1930).[54]

Notes

1. The 600 meter film, shot by Paul Guichard, was produced by Pathé Consortium and released in October 1923. Mme. Marie Epstein, the filmmaker's late sister, confirmed its loss to me in an interview conducted in July 1976.
2. Epstein, 'Le Regard du Verre,' *Les Cahiers du Mois* 16/17 (October 1925), pp. 9-10. Unless otherwise noted, all translations from Epstein's texts are mine.
3. Cf. Craig Owens, 'Photography *En Abyme*,' *October* 5 (Summer 1978), pp. 73-88.
4. Epstein, 'Le Regard du Verre,' p. 10.

5. See Jacques Lacan, 'The Mirror Stage as Formative of the Function of the I as Revealed in Psychoanalytic Experience,' (1949) in *Écrits*, trans. Alan Sheridan (New York: W.W. Norton, 1977), p. 4. I will return to this point.
6. Epstein, 'Le Regard du Verre,' pp. 10-11.
7. A personal note: It was in 1973, in a session of Annette Michelson's course on 'French Cinema from Delluc to the Death of Vigo' at New York University, that I heard Epstein's name for the first time. Annette was among the first in the United States to explore the implications of Epstein's theory of cinema for the advanced cinematic discourse of the silent period, preeminently Eisenstein and Vertov, as well as for the later American avant-garde. See her important essay, 'Reading Eisenstein, Reading Capital,' in *October* 2 (Summer 1976), pp. 27-38. It was Annette who asked me in 1977 to translate excerpts of Epstein's most significant works for the third issue of *October*, the distinguished journal that she co-founded with Rosalind Krauss. Since then, the American and British literature on Epstein, including my own 1980 doctoral dissertation prepared under her supervision, as well as important contributions by David Bordwell, Richard Abel, and Paul Willemen, has grown as more translations have become available. More recently, another of her students, Malcolm Turvey, has written a probing essay about Epstein, thereby continuing a tradition she has inspired and supported. See 'Jean Epstein's Cinema of Immanence: The Rehabilitation of the Corporeal Eye,' *October* 83 (Winter 1998), pp. 25-50. It needs to be said: in the case of Epstein, as in so many other byways of the cinema studies field, Annette has served as a model of intellectual acuity and integrity, and has been a constant source of encouragement for me as for so many of her colleagues and students, past and present.
8. Paris: Les Écrivains Réunis, 1926. Reprinted in Jean Epstein, *Écrits sur le Cinéma*, vol. 1 (Paris: Éditions Seghers, 1973), pp. 131-37.
9. Ibid., p. 134.
10. In France, projects for films composed entirely of graphic shapes, sometimes in color, in rhythmic movement date back to more than a decade earlier. Cf. Léopold Sturzwage (Survage), 'Le Rythme Coloré,' in *Les Soirées de Paris* 26-27 (July-August, 1914), pp. 426-29. Cf. also Blaise Cendrars, 'De la Parturition des Couleurs,' *La Rose Rouge* 12 (17 July 1919), p. 188; and Marcel Gromaire, 'Idées d'un Peintre sur le Cinéma,' *Le Crapouillot* (1919). The last is reprinted in Marcel L'Herbier, ed. *Intelligence du Cinématographe* (Paris: Éditions Corréa, 1946), pp. 239-49, and it was published in my translation in *Motion Picture* 2 (Fall 1986), pp. 4-5. Discussions about pure cinema therefore actually preceded the more famous controversy over 'la poésie pure' initiated by the Abbé Bremond's lecture at the Institut de France on 24 October 1925. Cf. Bremond, *La Poésie Pure* (Paris: Bernard Grasset, 1926); and Paul Valéry, *The Art of Poetry* (New York: Bollingen Foundation, 1958), pp. 39-51 and 184-92. For an extended account of the debate, cf. Henry Decker, *Pure Poetry in France, 1925-1930* (Berkeley: University of California Press, 1962). A full account of the pure cinema controversy remains to be written. See footnote 11 for an introductory bibliography.
11. A partial bibliography would include: Henri Chomette, 'Seconde Étape,' *Les Cahiers du Mois* 16-17 (October 1925), pp. 85-88; 'Cinéma, Art Multiple,' *Cinéa-Ciné Pour Tous* [hereafter *CCPT*] 68 (1 September 1926), pp. 9-10; 'Cinéma Pur, Art Naissant,' *CCPT* 71 (15 October 1926), pp. 13-14; Germaine Dulac, 'Conférence de

Madame Germaine Dulac,' *Cinémagazine* (December 1925), pp. 516-18; 'Du Sentiment à la Ligne,' *Schémas* (February 1927), pp. 26-31; Fernand Léger, 'Ballet Mécanique,' *L'Esprit Nouveau* 28 *(n.d.): n.p.* ; 'A Critical Essay on the Plastic Quality of Abel Gance's Film *The Wheel*,' (1922), trans. Alexandra Anderson in *Functions of Painting* (New York: Viking Press, 1973), pp. 20-23. Porte's articles are numerous and include 'Le Cinéma Pur,' *CCPT* 52 (1 January 1926), pp. 12-13; 'Cinéma Intellectuel ou Affectif,' *CCPT* 61 (15 May 1926), pp. 9-10; and 'Musique Plastique,' *CCPT* 68 (1 September 1926), pp. 22-23. For Fescourt and Bouquet (who co-authored their texts), see 'Sensations ou Sentiments,' *CCPT* 66 (31 July 1926), pp. 13-14; and *L'Idée et l'Écran* (Paris: G. Haberschill, 1925-26). For a useful compendium of theoretical reflections by avant garde filmmakers from across Europe, see Paolo Bertetto, ed. *Il cinema d'avanguardia, 1910-1930* (Venice: Marsilio, 1983); for early Italian developments, see Enzo Terzano, *Sulla Nascita del Cinema Sperimentale* (Florence: Loggia de'Lanzi, 1998).

12. *Les Cahiers du Mois* 16-17 (October 1925). The titles of all the lectures and a list of the speakers in both series are provided in advertisements at the front of the volume.
13. Epstein's objection to the centrality of narrative in films was longstanding. Cf. 'Le Sens 1 bis' (1921), in *Écrits*, pp. 85-93; trans. Tom Milne as 'The Senses 1 (b),' in *Afterimage* 10 (Autumn 1981), pp. 9-16.
14. 'De Quelques Conditions de la Photogénie' (1923), in *Écrits*, p. 137.
15. Jean Epstein, 'Grossissement' (1921), in ibid., p. 99; trans. Stuart Liebman as 'Magnification,' in *October* 3 (Spring 1977), pp. 9-15.
16. 'Le Regard du Verre,' p. 12.
17. 'L'Objectif Lui-Même,' *CCPT* (15 January 1926). Reprinted in *Écrits*, pp. 127-30. This article notably rehearses many of the same images and themes as 'Le Regard du Verre.'
18. Epstein's antagonism to the emerging formalist and Surrealist avant-gardes is explored in Nicole Brenez, 'Ultra-moderne. Jean Epstein contre l'avant-garde (Repérage sur les valeurs figuratives),' in Jacques Aumont, ed. *Jean Epstein. Cinéaste, Poète, Philosophe* (Paris: Cinémathèque Française, 1998), pp. 205-21. Cf. also Dominique Païni, 'Epstein et Man Ray: l'histoire d'un déni,' in ibid, pp. 149-57.
19. It is perhaps for this reason that many of Epstein's theoretical constructs in this essay as well as others have been have dismissed – wrongly, in my opinion – as mere lyrical effusions by several later commentators. See, for example, Dudley Andrew, *The Major Film Theories* (New York: Oxford University Press, 1976), p. 12; or Christian Metz, 'The Imaginary Signifier,' trans. Ben Brewster in *Screen* 16, no. 2 (Summer 1975), p. 54. Turvey gives far greater credit to Epstein's theoretical initiative, but he also correctly notes some of its failings: 'Epstein himself nowhere provides a logically coherent philosophy of mind or visual perception. Rather, his film theory is contradictory and often obscure...' ('Jean Epstein's Cinema of Immanence,' p. 27).
20. Empedocles was said to have thrown himself into the burning crater, a mythical event commemorated in such later poems as Hölderlin's 'Empedokles' and Matthew Arnold's verse play, 'Empedocles on Etna.'
21. Immanuel Kant, *The Critique of Judgement*. Trans. James Creed Meredith (Oxford: Clarendon Press, 1982), pp. 94-109. For an illuminating commentary on the

Kantian sublime, cf. Jean-François Lyotard, 'The Sublime and the Avant-Garde' (1984), trans. Lisa Liebmann, in J.-F. Lyotard, *The Inhuman* (Stanford: Stanford University Press, 1991), pp. 89-107.

22. See Geoffrey H. Hartman, 'Romanticism and "Anti-Self-Consciousness"' (1962), reprinted in Harold Bloom, ed. *Romanticism and Consciousness* (New York: W. W. Norton, 1970), pp. 46-56.
23. I owe many of the thoughts in the next paragraphs to Paul de Man's brilliant essay, 'Intentional Structure of the Romantic Image' (1960), reprinted in ibid., pp. 65-77.
24. Jean-Jacques Rousseau, *Julie ou La Nouvelle Héloise* (Paris: Éditions Garnier Frères, 1968), p. 51.
25. Epstein, *Écrits*, pp. 133-35.
26. De Man, 'Intentional Structure of the Romantic Image', p. 77.
27. 'Volcanoes in all their violence and destruction make our power of resistance of trifling moment in comparison with their might. But provided our own position is secure, their aspect is all the more attractive for its fearfulness.' Kant, *The Critique of Judgement*, pp. 110-11.
28. Here, as elsewhere in Epstein's writings, reason and logic are rejected as incompatible with anything touching upon depth psychology and aesthetic experience. Illuminating in this regard is his short text on Freud, breath-taking for the perversely cocky self-assurance with which he dismisses psychoanalysis. See 'Freud ou le Nick-Cartérianisme en Psychologie,' *L'Esprit Nouveau* 16 (1922), pp. 1857-64. A short passage from the essay's conclusion conveys his sweeping and conspicuously truculent rejection of the theoretical and therapeutic claims of psychoanalysis: '... one must acknowledge that Freudian theory is extremely engaging and, if not very intelligent, at least it is very clever, malicious and specious. I believe that I would not have said anything if psychoanalysis had no therapeutic pretentions. It is said that every therapy that is not completely ineffective cannot be completely inoffensive. This is especially true of psychoanalysis; for every person it cures (and I demand to see one) it must produce one hundred sick people.' According to Epstein, Freud had mistakenly attempted to explain psychological phenomena with a method rooted in rational categories that were lamentably inappropriate for such a task. In remarks calculated to ridicule, Epstein cavalierly likens the celebrated Viennese psychiatrist to an ingenious detective like Sherlock Holmes or Nick Carter. Epstein's charges and arguments, to be sure, are hardly beyond reproach, but need not concern us here. It is more important to comprehend what Epstein thought was at stake in his critique: nothing less than the need at all costs to preserve the difference, indeed, the absolute otherness, of that irrational realm he, like most of the contemporary French psychologists (preeminently Pierre Janet) he had read, persisted in calling '*le subconscient*.' His objections to psychoanalysis were tactical moves designed to insure that the 'subconscious,' the key construct in his epistemology and aesthetics, would never be colonized or tainted by the rationalizing 'logic' he believed lay at the heart of psychoanalytic method. Such a defense was as significant as the concept of 'fatigue' for his developing theory of film. For the context of Epstein's theories of fatigue and *le subconscient*, see my dissertation, "Jean Epstein's Film Theory, 1920-1922," New York University, 1980. See also Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (New York: Basic Books, 1990).

29. He will then almost immediately shift the metaphor and figure the cinema as an insect's multifaceted eye. Interestingly, the poet Blaise Cendrars, who had been Epstein's mentor, had also used this metaphor in his *L'ABC du Cinéma* written in the late 1910s.
30. For Epstein's critique of Descartes cf. *Écrits*, pp. 106-11 and 177-81.
31. Jacques Lacan, 'The Mirror Stage as Formative of the Function of the I as Revealed in Psychoanalytic Experience,' (1949), trans. Alan Sheridan, in *Écrits* (New York: W.W. Norton, 1977), p. 4.
32. Epstein is here alluding to a well-known anecdote about Mary Pickford.
33. Epstein's predilection for such a reading is perhaps clearest in his late book *Le Cinéma du Diable* (Paris: Éditions Jacques Melot, 1947). Reprinted in *Écrits*, pp. 355-410.
34. G.W.F. Hegel, *The Logic of Hegel*, trans. W. Wallace (Oxford: Oxford University Press, 1904), p. 57.
35. Bataille's sublime is, of course, an anti-sublime, and, for reasons that will shortly become clearer, one should not push the comparison too far. However, it is interesting that Bataille links the anti-sublime with volcanos and anality. 'I imagined the [pineal] eye at the summit of the skull like a horrible erupting volcano, precisely with the shady and comical character associated with the rear end and its excretions.' Georges Bataille, 'The Jesuve,' in Alan Stoekl, trans. and ed., *Visions of Excess. Selected Writings, 1927-1939* (Minneapolis: University of Minnesota Press, 1985), p. 74. Epstein makes a similar connection.
36. The Italo-French poet and man of letters (1879-1923) wrote a famous manifesto, 'Naissance d'un sixième art,' in 1911 that stimulated many reflections about cinema in France in subsequent years. Trans. Don Ranvaud, Sergio Sokota and Deborah Young in *Framework* 13 (Autumn 1980), pp. 3-7. Canudo died on 10 November 1923, not before publishing short but complimentary texts about the recently completed *La Montagne Infidèle*. See 'Le Personnage-Nature' in *Paris-Midi* (31 August 1923) and 'Films Sans Images,' *Paris-Midi* (12 October 1923). Both have been reprinted in the expanded version of Canudo's *L'Usine aux Images* (Paris: Séguier, 1995), pp. 303-5 and 322-24. The first edition was published in Lausanne in 1927. Epstein clearly likens Canudo's infectious passion for the cinema to Empedocles's self-immolation. The horrifying and yet strangely appealing act of jumping into the engulfing lava flow becomes, for Epstein, a hyperbolic figure for watching a movie.
37. 'Etna,' in *Écrits*, p. 133.
38. These are excellent examples of what Turvey, following Wittgenstein, calls 'aspect-dawning.' See Turvey, 'Jan Epstein's Cinema of Innocence,' p. 42 ff.
39. '*Photogénie*' was, of course, the word Louis Delluc, not Canudo, had proposed for the hypothetical essence of cinema. See Delluc, *Photogénie* (Paris: de Brunhoff, 1920). Epstein was very aware of divergences between their theoretical views since he had worked closely with both men. However, he apparently wished to overlook differences of emphasis in order to amalgamate the two as part of a united front of early champions of film art.
40. 'Etna,' in *Écrits*, p. 133.
41. Cf. 'Le sens 1 bis,' in *Écrits*, p. 92.
42. 'Etna,' in *Écrits*, pp. 136-37.

43. One might liken photogenic images to particularly visceral visual metaphors which challenge the viewer to attend to both the literal and extended meanings simultaneously. Cf. Max Black, 'Metaphor,' in Joseph Margolis, ed. *Philosophy Looks at the Arts* (New York: Scribner's, 1962), pp. 218-35.
44. Cf. his paeans to movement in 'Grossissement' (1921), in *Écrits*, pp. 94-95 and 98, as well as his more straightforward attempts to define *photogénie* as an oscillation in space and time in 'L'Essentiel du Cinéma' (1923), and 'Rythme et Montage' [n.d.], in *Écrits*, pp. 119-21. I translated the former as 'The Essence of Cinema,' in P. Adams Sitney, ed., *The Avant-Garde Film: A Reader of Theory and Criticism* (New York: New York University Press, 1978), pp. 24-25.
45. Such views are strikingly similar to Fernand Léger's contemporary speculations about 'the new realism.' See his 'A Critical Essay on the Plastic Quality of Abel Gance's Film *The Wheel*,' first published in *Comoedia* in 1922 and reprinted in *Functions of Painting*, trans. Alexandra Anderson (New York: Viking Press, 1973), pp. 20-23. See also Léger's essay 'A New Realism – the Object,' *The Little Review* (Winter 1926). This essay has been reprinted in Lewis Jacobs, ed., *Introduction to the Art of the Movies* (New York: Noonday, 1960), pp. 96-98. Léger's affectionately inscribed portrait of Epstein from 1922 has been reproduced as a centerfold illustration in Epstein's *Écrits*.
46. 'Etna,' in *Écrits*, p. 134. Epstein's vision of the dislocated, de-hierarchicalized, radically transformed, ruptile body in closeup also bears resemblances to the evolving tastes of the renegade Surrealist Georges Bataille. Denis Hollier's comments could almost be a commentary on Epstein as well: 'Each article [e.g., 'The Big Toe' and 'Mouth,'] published in Bataille's journal *Documents*, in fact, dislocates the body, isolates the organ it treats and disconnects it from organic supports, by turning it into the locus of a semantic concentration through which the part takes on the values that are tied to the whole. The whole is disarticulated by the article provoking insubordination in the part, which then refuses to respect the hierarchical relations defining it by its integration into the organic system as a whole.' See Denis Hollier, *Against Architecture: The Writings of Georges Bataille* (Cambridge, Mass.: MIT Press, 1989), p. 78. For a brief overview of artistic representations of the fragmented body, see Linda Nochlin, *The Body in Pieces* (New York: Thames and Hudson, 1994).
47. 'A heavenly game, thus do worlds fall – from where – into a space of light,' writes Epstein in 'Etna.' Wordsworth might have been writing of comparable instances of semantic lability when he invoked the power of the Imagination:
    lifting up itself ...
    in such strength
    Of usurpation, in such visitings
    Of awful promise, when the light of sense
    Goes out in flashes that have shewn to us
    The invisible world ...
    The Prelude (1805), VI, 525-537. Cf. also De Man's citation of passages from Rousseau, 'Intentional Structure of the Romantic Images,' pp. 76-77.
48. 'De Quelques Conditions de la Photogénie,' in *Écrits*, p. 140, trans. Tom Milne in *Afterimage* 10 (Autumn 1981), pp. 20-23.

49. One should hesitate before characterizing Epstein's theory of cinema as constituting an aesthetics. In fact, it might be more apt to describe his theory as an 'anti-aesthetics' since he often resisted categorizing the cinema as an art at all. For him, 'art' carried connotations of stale conventions and the threat of the *poncif*. He frequently remarked that cinema was something else entirely, that its great novelty required an entirely new aesthetic philosophy to be comprehended. Such comments should not be taken as empty rhetoric but as sincere conviction. Indeed, his theoretical texts – and preeminently 'Le Cinématographe Vu de l'Etna' – are precisely an effort to develop such an 'esthétique d'aujourd'hui.'
50. The best sources for the theory of 'fatigue' are Epstein's *La Poésie d'aujourd'hui: Un Nouvel État d'intelligence* (Paris: La Sirène, 1921) and *Le Phénomène Littéraire*, originally published in *L'Esprit Nouveau* in 1921 and reprinted in J. Aumont, ed., *Jean Epstein*, pp. 39-84.
51. Eruptions and lava flows are important images of Bataille's 'informe.' Cf. Georges Bataille, 'L'Anus solaire,' *Oeuvres Complètes* 1 (Paris: Gallimard, 1970), p. 85. As I suggested, there are enough points of convergence to warrant a closer look at the possible relationship between Epstein's and Bataille's writings. Coincidentally, Bataille also wrote a text called 'The Ascent of Mount Aetna' (1939), trans. Annette Michelson in *October* 36 (Spring 1986), pp. 103-6.
52. 'Etna,' in *Écrits*, pp. 134-35.
53. While one should also note pioneering studies on the anal phase by Freud, Jones and Ferenczi, the classic psychoanalytic studies are Karl Abraham's 'Contributions to the Theory of the Anal Character' (1921) and many sections of 'A Short Study of the Development of the Libido, Viewed in the Light of Mental Disorders' (1924). Both are reprinted in Karl Abraham, *Selected Papers on Psychoanalysis*, trans. Douglas Ryan and Alix Strachey (London: Maresfield Library, 1927), pp. 370-92 and 418-501, respectively. For an extended contemporary commentary, see Leonard Shengold, *Halo in the Sky: Observations on Anality and Defense* (New Haven: Yale University Press, 1988). Particularly interesting are Shengold's comments on the 'magical' atmosphere of the anal phase, and the shifts between idealization and devaluation that characterize it.
54. Allen S. Weiss has perceptively linked the scatological treatment of lava flows in the well-known scenes when Modot imagines the heroine on the toilet to Buñuel's admiration for Bataille's writings. See his 'Between the Sign of the Scorpion and the Sign of the Cross: L'Age d'Or,' in Rudolf Kuenzli, ed., *Dada and Surrealist Film* (New York: Willis, Locker & Owens, 1987), pp. 159-75. It is entirely possible, however, that Buñuel, an attentive reader (and translator into Spanish) of Epstein's writings, and a connoisseur of Epstein's work who had already mocked the acting style, slow-motion recording speeds, and camera movement of Epstein's La Chute de la Maison Usher (1928) in his and Dali's Un Chien Andalou (1929), may have been obliquely rendering homage to, even as he parodied, his master's perverse vision of cinema in his own perverse cinematic masterwork. Could the images of the lava flow have even been scavenged from Epstein's lost film?

Transfiguring the Urban Gray

László Moholy-Nagy's Film Scenario 'Dynamic of the Metropolis'

Edward Dimendberg

Few episodes in cinema history appear more secure than the genre of the city symphony that emerged in the 1920s and whose best-known examples remain Berlin: Symphony of a Great City (Walther Ruttmann, 1927) and Man with a Movie Camera (Dziga Vertov, 1929). Encompassing around twenty titles, city symphonies rely heavily upon montage to represent a cross-section of life in the modern metropolis.[1] They typically are set in one or more identifiable metropoles whose population, central thoroughfares, and places of residence, employment, and leisure they depict over the course of a day, a temporal structure that has inflected films noir such as The Naked City (Jules Dassin, 1948) and countless examples of narrative and experimental cinema. Yet such works resist categorization as documentary, experimental, or narrative film. Their interest resides in the cinematographic preservation of ephemeral urban life no less than an aesthetic structure that itself evokes the rhythms, parallels, and contrasts of metropolitan civilization.

The project of explicating the city symphony – as well as the less chronologically structured city films of the 1920s in relation to the accounts of urban modernity developed by Georg Simmel, Walter Benjamin, and Siegfried Kracauer – is one to which film analysts over the past two decades have devoted increasing attention.[2] It was Annette Michelson who introduced Simmel's work into cinema studies through her discussion of his 1903 essay 'The Metropolis and Mental Life' in a 1979 analysis of The Crazy Ray (Paris qui dort) (René Clair, 1924).[3] Reading Clair's film simultaneously as exploration of the 'topography of a great city' as well as metacinematic reflection upon the potentialities of the nascent film medium, Michelson stresses its representation of 'temporality, apprehended as movement in space' and the significance of the temporal organization of the workday as mainspring of the urban capitalist economy.

Yet despite the abundance of scholarship on the city films of the 1920s there remains a key text in its history that largely has been ignored: László Moholy-

Figure 1

Nagy's unfilmed scenario 'Dynamic of the Metropolis' (DM).[4] Although known to cinema scholars through his films The Old Port of Marseilles (1929), Light Display: Black, White, Gray (1930), and Berlin Still Life (1931), Moholy-Nagy was a polymath whose virtuosity in the media of painting, photography, design, and pedagogical innovations at the Bauhaus have tended to overshadow his interest in cinema.[5] This facility with diverse media is powerfully confirmed by the visual and conceptual synthesis he realized in DM that bears traces of the varied aesthetics of Constructivism, Dada, and De Stijl. And it is equally conveyed by the relation between urban perception and cinematic representation explored by Moholy-Nagy in his prescient 1925 book *Painting, Photography, Film* (PPF).

Although Moholy-Nagy began conceptualizing his 'sketch of a manuscript for a film' in 1921, it was not fully completed until the summer of 1924. He first published it in September of that year in Hungarian in *MA*, an avant-garde journal for which he served as a Berlin correspondent and whose contributors included Fernand Léger, Alexander Vesnin, Kurt Schwitters, and El Lissitzky.[6]

Fugure 2

The text later was translated into German and published in 1925 as an appendix to PPF, the eighth volume in the Bauhaus book series that Moholy-Nagy directed. Reproducing aerial, scientific, and news photographs, frame enlargements from films, photograms by Man Ray, and avant-garde compositions by Hannah Höch, PPF exercised a major influence upon the expanding discussion of photography during the Weimar Republic, and it subsequently was issued in a second edition in 1927. Thus, although DM appears in 1925 as an appendix to the first edition of PPF, its gestation actually precedes the book by four years. This fact together with the book's explicit references to DM, suggests the necessity of reading them in unison, the goal of this essay.

The earliest version of DM published in *MA* bears the copyright of the Staatliches Bauhaus in Weimar where Moholy-Nagy began to teach the metal workshop and the foundation course in 1923 (figs. 1 and 2). Illustrated exclusively with hand drawings and what Krisztina Passuth calls 'drawn signs almost reminiscent of ideograms,' its emphasis upon directional movement conveyed by arrows is graphically intelligible even to readers who lack a

knowledge of Hungarian.[7] Commencing with a filmstrip in the top of the left column, the page adopts a linear structure within which vertically organized blocks of text and graphic material appear analogous to the individual frames in a film strip. Passuth suggests the film experiments of Viking Eggeling and Hans Richter were the likely source of this design scheme, a hypothesis confirmed by the former's Diagonal Symphony (1922) and Richter's vertical scroll painting Orchestration of Color (1923).[8] Yet the frequency with which railroad imagery appears in Moholy-Nagy's paintings from the 1920s suggests the material infrastructure of the city as a no less crucial intertext.[9]

Typographical experimentation was an important component of *MA* throughout the 1920s, and its editor Lajos Kossák produced his own concrete poems (*Bildgedichte*) and published those of Kurt Schwitters in the journal. Yet the earlier typographical explorations of Futurist Filippo Tommaso Marinetti and Dadaist Raoul Hausmann in which multiple fonts are deployed in various sizes across the page present themselves as an equally important intertext for DM.[10] Explored by Stéphane Mallarmé in *Un coup de dés jamais n'abolira le hasard* (1897) and later in the 'lyrical ideograms' of Guillaume Apollinaire (1914), the copious spacing in both Moholy-Nagy's scenario and these prior examples necessitates the activities of reading and seeing in equal measure.

The eye wanders across the page, grasping the meaning of individual words and lines as well as the composed shapes they contribute to the poetic effect of the whole. More than merely a storyboard for an unrealized film, both the Hungarian and German versions of DM suggest themselves as kinetic works of visual and verbal poetry that mimic the dynamism of their subject, the city. It is important to remember that Moholy-Nagy began his career as a poet, and the graphic structure of DM exemplifies the syncretic ambitions evident throughout his work in different media.

Theoretical statements of modernist typographic practice became increasingly common during the years 1923-25 and were expressed in a series of separate manifestoes by Moholy-Nagy and Russian Constructivist El Lissitzky. In his 1923 'Topography of Typography,' the latter advocated 'the design of the book-space using process blocks which issue from the new optics.'[11] Moholy-Nagy also espoused an 'uninhibited use of all linear directions' and devoted much of his 1923 essay 'The New Typography' to the significance of photography and film, the technologies exemplifying the new optics. Reflecting upon their social implications, he observes that:

> It is safe to predict that this increasing documentation through photography will lead in the near future to a replacement of literature by film. The indications of this development are apparent already in the increased use of the telephone which makes letterwriting obsolete. It is no valid objection that the production of films de-

> mands too intricate and costly an apparatus. Soon the making of a film will be as simple and available as now printing books.[12]

Ever attentive to the evolution of technological forms, Moholy-Nagy perceives the relation among literature, photography, and film as a dialectical one in which the final term, cinema, will eventually subsume the functions associated with the earlier media. Read in the context of DM, his theory underscores the limitations of the scenario's first draft, confined as it was to drawings and typographic symbols. It prefigures the significance that photography would assume in the German version of DM, published two years after his arrival at the Bauhaus, as well as the films which Moholy-Nagy would begin to make in 1926.

Moholy-Nagy recounts the gestation and aim of his project in an introduction that precedes the scenario. He mentions his hope to realize the project with his friend Carl Koch, from whom he derived significant ideas for it, as well as its rejection by the large film company UFA. 'Other film people could "find no action in it despite the good idea" and so declined to film it,' Moholy-Nagy wrote.[13] He locates the aesthetic intention of DM in the attainment 'of the FILMIC, that is of the film which proceeds from the potentialities of the camera and the dynamics of motion.'[14] He writes:

> The intention of the film 'Dynamic of the Metropolis' is not to teach, nor to moralize, nor to tell a story; its effect is meant to be visual, *purely* visual. The elements of the visual have not in this film an absolute logical connection with one another; their photographic, visual relationships, nevertheless, make them knit together into a vital association of events in space and time and bring the viewer actively into the dynamic of the city.[15]

Opposing his film to 'literary, theatrical action,' Moholy-Nagy aspires to attain a 'dynamic of the optical' with 'much movement, some heightened to the point of brutality.'[16] 'Almost everyone on the roller coaster shuts his eyes when it comes to the great descent. But not the film camera,' he observes.[17] The introduction also documents his awareness of other cinematic experiments, and he alludes to Ballet Mécanique (Fernand Léger, 1924) and Entr'acte (René Clair, 1924), both films in which movement serves as a key structural device.[18] In a note to the second edition he also mentions Ruttmann's Berlin: Symphony of a Great City and Napoléon (Abel Gance, 1927) as works of silent film which share the aspirations of DM and aim toward the realization of 'simultaneous cinema,' a notion to which I shall return.

In its visual appearance the German version of DM differs from the Hungarian scenario not merely through its photographic illustration but also through its design (figs. 3-6). Moholy-Nagy divides each page into a series of irregularly sized closed orthogonal figures. These squares and rectangles are

Figure 3

formed by black lines of varying thickness running vertically and horizontally across the page and bleeding to its edges. They recall many of Piet Mondrian's paintings from the early 1920s with which Moholy-Nagy, a contributor in 1922 to the journal *De Stijl*, was certainly well acquainted.[19] The lines radically transform the conventional figure and ground relation in most traditional graphic design by directing attention to the complete surface of the page; its white spaces now become an active part of the composition rather than mere background.

Unlike the Hungarian scenario, the vertical columnar structure is abandoned in the German version in which pages contain between two and six columns and sometimes no columns at all. Designed to be read vertically and horizontally, DM contains few recurrent stylistic features (apart from its typographic consistency) which would serve to orient the reader. Blocks of type of uneven widths are dispersed in a manner that makes it difficult to discern their intended sequential relation. Moholy-Nagy varies the position of his commentary between the left and right sides of the page. Graphically prominent elements such as the thick black bar labelled 'Screen Black for 5 Seconds' pull the eye of the reader away from the top of the page toward the center. Such techniques exemplify the practice of 'typofoto' that for Moholy-Nagy 'governs the new tempo of the new visual literature' (fig. 6). Ideally suited for DM, the

Figure 4

typofoto realizes a visual structure whose 'mode of modern synoptic communication may be broadly pursued on another plane by means of the kinetic process, the film.'[20] Through its employment of the 'phototext' in place of words, Moholy-Nagy cites DM as an instance of typofoto.[21]

The text and images in DM support the account of photography that Moholy-Nagy develops throughout PPF, especially the ability of the camera to present spatial and temporal relations inaccessible to the unaided human eye.[22] Thus, on the first page, the building of a zeppelin emerges through the joining together of moving dots and lines in an animated film so as to emphasize the compression of time (fig. 3). It is probably not coincidental that Moholy-Nagy begins his scenario by depicting a construction process, a metaphor for the production of new relationships that he understands as the goal of art.[23] Nearly every idea described in DM involves motion either in its conception or in the manner of its cinematic representation. On the same page, in describing the construction of a house, Moholy-Nagy expressly indicates that it is to be filmed from both below and above, thereby dynamizing its presenta-

tion through the use of the oblique angle favored by other practitioners of the 'new vision' such as Alexander Rodchenko.

On the second page of the scenario, Moholy-Nagy introduces two of the recurrent motifs in DM (fig. 3). The word 'tempo' appears repeatedly throughout, as if to maintain the proper rhythm for the film (fig. 4). Recalling the similar practice of indicating on a musical score the correct speed for its performance, its repetition in DM in the most graphically varied forms (vertical, horizontal, detached) serves to convey dynamism. Sometimes, as on the fourth page, the division of the word into its constituent syllables and their nonsensical reiteration evokes the poetic experimentation of his close friend Kurt Schwitters.[24] Linguistic signifier and its signified are pulled apart to reveal their intrinsically arbitrary relation masked by convention.[25]

The other recurrent motif in DM is the savage animal, here introduced by a tiger pacing furiously around its cage. In a commentary in the margin, Moholy-Nagy emphasizes the 'contrast between the open unimpeded rushing and the oppression, constriction. So as to accustom the public from the outset to surprises and lack of logic.'[26] Two pages later, an angry lynx appears, and after another ten pages a lion baring its teeth manifests itself. 'The frequent and unexpected appearance of the lion's head is meant to cause uneasiness and oppression (again and again and again). The theatre audience is cheerful – and STILL THE HEAD comes! etc.'[27] That producing such anxiety in the spectator constitutes an aesthetic goal of DM is as revealing as the means selected by Moholy-Nagy to attain it. Despite the continual repetition of the lion, Moholy-Nagy aspires to retain the disturbing impact of its first appearance. In this concern with severing logical connections and disorienting the spectator DM betrays more than a hint of Dadaism.

Preserving this freshness of perception is also suggested by the filming from unusual angles described throughout DM. A typical strategy involves the presentation of alternate high and low angle views. Thus, a moving train is first filmed from a bridge above and is followed by a shot from the trench below.[28] Aerial photographs are juxtaposed with shots of the sewers, a chimney slanting upward is presented with a deep-sea diver who emerges from it and plunges into water. These antitheses might justly be described as optical calisthenics whose intention is to educate vision and expand sensory perception.[29] They extend to tonal contrasts, as in the transformation of total darkness into light or in the opposition of arc lamps, electric signs, and fireworks to the blackness held on the screen for five seconds.

Besides introducing an oscillating rhythm into DM, such oppositions emphasize the range of the formal capabilities of cinema, including its ability to slow down or reverse time and motion. Thus, in one caption Moholy-Nagy describes automobile traffic moving away from the urban center, only to change

direction back toward the center, where it sinks into the ground. And in an even more dramatic example, Moholy-Nagy writes that 'from here the whole film (shortened) is run BACKWARDS as far as the JaZZ BAND (this backwards too).'[30] Once again, the effect of such a technique (that prefigures both Man with a Movie Camera and much subsequent avant-garde cinema) is to denaturalize the unfolding of the film in a gesture of self-reflexivity.[31]

The reliance upon contrasts in DM touches upon the profound characteristics of urban life. Writing of the cultural forces that stimulate the development of non-objective art, Moholy-Nagy claims:

> One such factor, for example – as it will be of some importance to recognise – is that the interplay of various facts has caused our age to shift almost imperceptibly towards colourlessness and grey: the grey of the big city, of the black and white newspapers, of the photographic and film services, the colour-eliminating tempo of our life today. Perpetual hurry, fast movement cause all colours to melt into grey. Organised grey-relationships, the living relationships of chiaroscuro, will, of course, emerge later on as a new aspect of the biological-optical experience of colour. Intensive examination of photographic means will certainly contribute much to this. In view of these contingencies, we shall need to bring greater readiness and care to sovereign creation in colour, if we wish to prevent the atrophying of our optical organs.[32]

Reading this passage, one thinks immediately of a similar idea developed by Simmel in 'The Metropolis and Mental Life' where he writes that:

> This physiological source of the metropolitan blasé attitude is joined by another source which flows from the money economy. The essence of the blasé attitude consists in the blunting of discrimination. This does not mean that the objects are not perceived, as is the case with the half-wit, but rather that the meaning and differing value of things themselves, are experienced as insubstantial. They appear to the blasé person in an evenly flat and gray tone; no one object deserves preference over any other. This mood is the faithful subjective reflection of the completely internalized money economy.[33]

Yet the differences between Simmel and Moholy-Nagy could not be more striking. Both understand the metropolis as the seat of the exchange process whose intensity and rapidity blunts the perception of specific qualities and levels the world into a series of gray tones.[34] Unlike Simmel, Moholy-Nagy grasps this state not as a malaise but as an aesthetic opportunity, the condition of possibility for his own artistic and cinematic practice. As he claims above, 'organised-grey relationships' can be assimilated within a new experience of color through the appropriate utilization of photography. The way beyond the grayness of the devalued objects of urban civilization resides not in the further

Warehouses and cellars
Darkness
DARKNESS
Becoming gradually lighter
Railway
Highway (with vehicles)
Bridges. Viaduct. Water below: boats in waves. Cable railway above
Shot of a train taken from a bridge. Train above. Train below
(The belly of the train, as it passes, taken from a trench between the rails)
A watchman outside. Glasses worn.
Close up: an eye
126

Figure 5

Taylorization of perception but rather in a more nuanced intake of sensory stimuli, albeit one now consciously organized by the artist.

A compelling example involves the notion of simultaneous cinema. Separate characters and events simultaneously appear on a single film screen at different chronological stages and overlap and coincide.[35] Moholy-Nagy describes this technique as suitable for the presentation of narratives about multiple characters or for use in abstract 'non-objective light projections' analogous to his photograms. Once again, the metropolis provides the condition of possibility for the transformation in perception to which such an aesthetic responds.

> The realization of such plans makes new demands upon the capacity of our optical organs for simultaneous acoustical and optical activity. Everyday life itself affords examples of this: Berliners cross the Potsdamer Platz. They are talking, *they hear simultaneously:* the horns of the motor-cars, the bells of the trams, the tooting of omnibuses, the halloos of the coachmen, the roar of the underground railway, the shouts of the newspaper sellers, the sounds of a loudspeaker, etc. and can keep these differ-

Figure 6

ent acoustical impressions separate from one another. Whereas a provincial, recently found quite disoriented in this Platz, was so greatly confused by the number of impressions that he stood as though rooted to the spot before an oncoming tram. It is obviously possible to construct an analogous situation with optical experiences.[36]

Here Moholy-Nagy eloquently describes the aesthetic project of DM, for in its marshalling of contrasting stimuli it suggests that cinema can assume the project of fine-tuning the human sensorium to respond to the new perceptual realities of technological urban civilization.[37] Not surprisingly, one of the few close-ups indicated in DM is that of a human eye. Yet the intent of this education does not rest in forcibly adapting the film viewer to the imperatives of the metropolis and the capitalist economy, an interpretation offered by Manfredo Tafuri in his analysis of urban montage.[38] Nor, as Kracauer observed about Ruttmann's film, can the aesthetic of DM be described as indifferent to the often-harsh urban realities it depicts.[39] A suggestive case in point is the opposition of the lion's head to the rubber truncheons of the police in Potsdamer

Platz, a cogent reminder of the political struggles of the Weimar Republic. Like Vertov, Moholy-Nagy emphasizes cinema as a cognitive instrument and shares the antipathy of the former toward its usurpation by literary and theatrical modes.[40] Already in his 1922 essay 'Production – Reproduction' (first published in the journal *De Stijl* and reprinted in PPF), he had developed the notion of the human being as a synthesis of various perceptual apparatuses capable of receiving unlimited stimuli. He writes:

> Art actually performs such a training – and this is one of its most important tasks, since the whole complex of effects depends on the degree of perfection of the receptive organs by trying to bring about the most far-reaching *new* contacts between the familiar and the as yet unknown optical, acoustical and other functional phenomena and by forcing the functional apparatuses to receive them. It is a specifically human characteristic that man's functional apparatuses can never be saturated; they crave ever new impressions following each new reception. This accounts for the permanent necessity for new experiments. *From this perspective, creative activities are useful only if they produce new, so far unknown relations.* In other words, in specific regard to creation, reproduction (reiteration of already existing relations) can be regarded for the most part as mere virtuosity.[41]

Once more, the contrast between Simmel and Moholy-Nagy proves illuminating. Whereas the former understands the flow of sense impressions to culminate in overstimulation and the blasé attitude, the latter comprehends the continual reception and mastery of stimuli as the basis for the creative responses of the artist, which lead in turn to new perceptual relations. Moholy-Nagy admits no possibility of sensory 'oversaturation,' discerning the prospect of growth and cognitive mastery where Simmel finds only enervation. Within the biocentric world view of Moholy-Nagy, the simple reproduction of the visible world without the emergence of greater complexity or challenges to the human perceptual apparatuses remains decidedly inferior to the production of new relations, new experiments, and new visions.[42]

Such an account goes far in explaining those features of DM that presciently reproduce what today appears among the most prominent icons of Weimar culture, already selected by Moholy-Nagy for publication in the first edition of PPF in 1925 before they had yet attained their later renown. Renger-Patzsch's photography, the Tiller Girls dancing troupe later analyzed by Kracauer in his 1927 essay 'The Mass Ornament,' a glass elevator (such as appeared in Murnau's 1924 The Last Man), neon signage in the illuminated metropolis (such as concludes Ruttmann's film), and a photograph of New York by Knud Lönberg-Holm later appropriated by Erich Mendelsohn in his 1926 America: A Photographic Album of an Architect, are only some of the most obvious examples.[43] Yet through his combination of such elements and their generation

of new perceptual relations, Moholy-Nagy transcends the domain of reproduction.

Breaking from the absolute films of Richter and Eggeling, Moholy-Nagy went beyond their animated abstractions toward the actual montage of fragments of urban reality.[44] Yet as should by now be apparent, DM also differs from the city symphony in a key respect, for it contains few geographic allusions or references to a single specific city. Rather than depict the unities of time and place, Moholy-Nagy pursues a mode of metacinematic exploration that takes the modalities of perceptual and cinematic responses to the metropolis as its subject matter.[45]

Never does Moholy-Nagy suggest in which city his film should be realized, a fact underscored by the varied locales of its photographs and their equally diverse makers. Despite the praise Moholy-Nagy lavished upon *Ballet Mécanique*, DM lacks the fascination with machines and mechanical movement central to the film of Léger.[46] Although sometimes mistaken for an adherent of the New Objectivity and a member of the cult of technological rationality ubiquitous during the Weimar Republic, Moholy-Nagy distanced himself from these tendencies.[47] Nor does he share the enthusiasm for urban mass culture such as shown by Charlie Chaplin and commercial advertisements evident in the films of both Léger and Ruttmann. When he does appropriate flashing electric signage as graphic material in DM, it is to spell out 'Moholy' in a continuously repeating phrase rather than illustrate a particular cultural trend (fig. 6). For if the metropolis presents 'a breathless race, the hubub of the city,' DM transcends the mere reproduction of this chaos.[48] Through the realization of a cinematic structure that allows contrasts and oppositions within the city to be systematically assimilated by the film viewer, it shares many of the same objectives with the films of Vertov and prefigures Moholy-Nagy's subsequent cinematic efforts. Yet if the goal of cognitive mastery advocated by these two pioneers appears implausibly *retardaire* to some contemporary students of film and photography because of its faith in photographic verisimilitude, the final image of PPF might well cause them to think differently. There, Moholy-Nagy includes a wireless telegraphed fingerprint reproduced from the newspaper *Weltspiegel*, as if to conclude his book with a portent of the future: electronic picture archives, data networks, and the production and reproduction of images without camera or object, the photograms of the digital era. The project of creatively explicating the new visual relations elicited by these technologies, today an urgent cultural and political necessity, awaits the Vertovs and Moholy-Nagys of our own age.

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films of László Moholy-Nagy. Preliminary research for this essay was conducted during a visiting scholar residency at the Canadian Centre for Architecture in Montreal.

Notes

1. A complete filmography of city symphonies of the 1920s has never been compiled. Significant examples include *Manhatta* (Paul Strand and Charles Sheeler, 1921), *Twenty-Four Dollar Island* (Robert Flaherty, 1924), *Rien ques les heures* (Alberto Cavalcanti, 1926), and *City Symphony* (Herman G. Weinberg, 1929). The most insightful study that also contains the most sustained analysis of 'Dynamic of the Metropolis' remains William Charles Uricchio, 'Ruttmann's "Berlin" and the City Film to 1930,' unpublished Ph.D. diss., New York University, 1982. See also many of the essays collected in *Lovers of Cinema: The First American Film Avant-Garde 1919-1945*, ed. Jan Christopher Horak (Madison: University of Wisconsin Press, 1995).
2. For citations of many of these references see my article 'From Berlin to Bunker Hill: Urban Space, Late Modernity, and Film Noir in Fritz Lang's and Joseph Losey's M,' *Wide Angle* 19, no. 4 (October 1997), pp. 62-93. The relation of the city in Weimar cinema to the postwar film noir is treated at length in my book, *Film Noir and the Spaces of Modernity* (forthcoming). While it is clear that the appearance of the metropolis in cinema is as old as the film medium itself, I take the coincidence of the city symphonies with a broad range of cultural, economic, and intellectual developments during the 1920s as grounds for differentiating them from earlier cinematic representations of urban life.
3. Annette Michelson, 'Dr. Crase and Mrs. Clair,' *October* 11 (Winter 1979), pp. 31-54.
4. László Moholy-Nagy, 'Dynamic of the Metropolis,' in *Painting, Photography, Film* trans. Janet Seligman (Cambridge, Mass.: MIT Press, 1969), pp. 122-37. All subsequent citations and figures in English are from this edition unless otherwise indicated.
5. Thoughtful discussions of the career of Moholy-Nagy together with a selection of his own writings are found in Richard Kostelanetz, ed. *Moholy-Nagy* (New York: Praeger, 1970); Andreas Haus, *Moholy-Nagy: Photographs and Photograms,* trans. Fredric Samson (New York: Pantheon Books, 1980); and Krisztina Passuth, *Moholy-Nagy,* trans. from the Hungarian by Éva Grusz, Judy Szöllósy, and László Baránszky Jób; from the German by Mátyás Esterházy (London: Thames and Hudson, 1985). Two recent studies also worth consulting are Eleanor M. Hight, *Picturing Modernism: Moholy-Nagy and Photography in Weimar Germany* (Cambridge: MIT Press, 1995) and Jan-Christopher Horak, *Making Images Move: Photographers and Avant-Garde Cinema* (Washington and London: Smithsonian Institution Press, 1997), especially, pp. 109-36.

6. An English translation of the Hungarian text of 'Dynamic of the Metropolis' first appeared in István Nemeskürty, *Word and Image: History of the Hungarian Cinema*, trans. Zsuzsanna Horn (Budapest: Corvina Press, 1968), pp. 62-67. It is reprinted in Kostelanetz, ed. *Moholy-Nagy*, pp. 118-23. The journal *Ma* (Today) (1916-1925) was edited by the Hungarian poet, painter, and theoretician Lajos Kassák and reproduced a wide range of work by avant-garde practitioners such as Vladimir Tatlin, Viking Eggeling, and Theo Van Doesburg. For discussions of its editorial policies and legacy see Miklós Bélái, 'Hongrie,' in *Les avant-gardes littéraires au xxe. siècle*, ed. Jean Weisgerber (Budapest: Akadémiai Kiadó, 1986), pp. 546-49; Krisztina Passuth, 'The Avant-Garde in Hungary and Eastern Europe,' in S.A. Mansbach, ed. *Standing in the Tempest: Painters of the Hungarian Avant-Garde, 1908-1930* (Santa Barbara, CA: Santa Barbara Museum of Art, 1991), pp. 169-85; Oliver Botar, 'A Comparative Chronology: Hungarian and International Avant-Garde Art: 1905-1930,' in ibid., pp. 187-211; and idem, 'From the Avant-Garde to "Proletarian Art": The Emigré Hungarian Journals *Eység* and *Akasztott Ember*, 1922-23,' *Art Journal* 52, no. 1 (Spring 1993), pp. 34-45.
7. Passuth, *Moholy-Nagy*, p. 38.
8. Ibid. For discussions of the scroll films and paintings of Eggeling and Richter see *Hans Richter by Hans Richter*, ed. Cleve Gray (New York: Holt, Rinehart and Winston, 1971), esp. 38-41 and 82-84. For the career of Eggeling see Louise O'Konor, *Viking Eggeling 1880-1925. Artist and Film-maker. Life and Work* (Stockholm: Almqvist and Wiksell, 1971). Moholy-Nagy reproduces frame enlargements from *Diagonal Symphony* on two pages in the first edition of PPF but devotes only a single page to them in the second edition.
9. Levente Nagy argues that this imagery coincides with the move in Moholy-Nagy's paintings toward non-figurative compositions in such works as the 'Large Railway Painting' of 1920-21. See 'Der Aufenthalt von László Moholy-Nagy in Wien und seine Kunst in der Zeit von 1920-1922,' unpublished lecture, Budapest, May, 1985. I am grateful to Hattula Moholy-Nagy for making this text available to me.
10. For a discussion of the typographical experimentation of Marinetti, Hausmann, and other avant-garde figures, see Herbert Spencer, *Pioneers of Modern Typography* (London: Lund Humphries, 1969), and Johanna Drucker, *The Visible Word: Experimental Typography and Modern Art, 1909-1923* (Chicago: University of Chicago Press, 1994).
11. El Lissitzky, 'Topographie der Typographie,' originally published in *Merz* no. 4 (1923); translated in S. Lissitzky-Küppers, *El Lissitzky* (London: Thames and Hudson, 1968), p. 355. Quoted in modified translation in Robin Kinross, *Modern Typography: An Essay in Critical History* (London: Hyphen Press, 1992), p. 87.
12. 'Moholy-Nagy, 'The New Typography,' in Kostelanetz, ed. *Moholy-Nagy*, p. 75.
13. Moholy-Nagy, *Painting, Photography, Film*, p. 122.
14. Ibid.
15. Ibid.
16. Ibid, p. 123. The hostility of Moholy-Nagy toward the imposition of literary and theatrical forms upon the cinema recalls, of course, the work of Dziga Vertov. An interesting precedent for DM is *Die Pest* (The Plague) written by the German poet Walter Hasenclever in 1920, apparently the first film scenario ever to be published

in German. It was later described as being composed in a 'telegram-style,' although it remains unclear whether Moholy-Nagy may have known it. A description of the scenario is contained in *Hätte Ich das Kino! Die Schriftsteller und der Stummfilm* (Marbach am Neckar: Deutscher Literaturarchive, 1976), pp. 407-9. I am grateful to Oliver Botar for bringing Hasenclever to my attention.

17. Ibid., p. 130. Translation slightly modified.
18. In *Ballet Mécanique* one thinks of the shots of a woman in a swing and a repeated sequence of another woman climbing a flight of stairs without ever reaching the top, as well as the numerous images of revolving and spinning shapes. Movement in *Entr'acte* is most conspicuous in the chase at the conclusion of the film.
19. Both Mondrian and Van Doesburg also published in *MA*. It should be noted, however, that Moholy-Nagy broke from van Doesburg around 1922 on account of what he perceived as the insufficiently dynamic character of the Dutch artist's compositional emphasis upon the horizontal, the vertical, and the diagonal as well as its failure to incorporate temporal rhythms. A helpful discussion of this history is found in Victor Margolin, *The Struggle for Utopia: Rodchenko, Lissitzky, Moholy-Nagy, 1917-1946* (Chicago: University of Chicago Press, 1997), pp. 45-80, especially p. 64.
20. Moholy-Nagy, *Painting, Photography, Film*, p. 40.
21. Ibid.
22. Ibid., p. 28.
23. In the Hungarian version of DM, it is a crane rather than a zeppelin that appears in this section.
24. See Kurt Schwitters, *Poems, Performance Pieces, Proses, Plays, Poetics*, ed. and trans. Jerome Rothenberg and Pierre Joris (Philadelphia: Temple University Press, 1993).
25. One consequence of this is the release of the phrase 'po,' in German a common designation of the human buttocks.
26. Moholy-Nagy, *Painting, Photography, Film*, p. 125.
27. Ibid., p. 135.
28. Such an image appears at the beginning of Ruttmann's *Berlin: Symphony of a Great City*.
29. These techniques are repeated throughout the films Moholy-Nagy made in Marseille and Berlin as well as in many of his photographs. Their predilection for overhead views of a busy street scene with movement in all directions is prefigured by the emphasis upon multi-directional movement in DM.
30. In the 1925 edition of PPF Moholy-Nagy concludes the theoretical portion of the volume with an injunction to the reader 'to read through the entire book once again,' thus introducing a loop structure and a backward movement into the text. The 1927 version of DM similarly concludes with the phrase 'the whole thing to be read through again quickly' on its final page.
31. Annette Michelson has perceptively analyzed this reversal in Vertov's film as an instance of the rhetorical figure of hysteron proton. See her '*The Man with a Movie Camera*: From Magician to Epistemologist,' *Artforum* X, no. 7 (March 1972), pp. 60-72.
32. Moholy-Nagy, *Painting, Photography, Film*, p. 15. It is telling that these lines do not appear in the 1925 edition of the book, an omission that possibly relates their sub-

sequent appearance to an altered cultural climate, including the films of Ruttmann and Gance mentioned in a note to the 1927 reprint of DM.

33. Georg Simmel, 'The Metropolis and Mental Life,' trans. Hans Gerth in *Simmel on Culture*, ed. David Frisby and Mike Featherstone (London: Sage, 1997), p. 178.
34. Neither Simmel nor Moholy-Nagy appears to be claiming that objects in the devalued metropolis actually are perceived as grey in the manner that would result if one were to don a pair of dark glasses with the proper tint of lens. Their use of grey should be understood as a psychological metaphor rather than a perceptual description that conveys how the world is experienced rather than how it actually looks. Much the same way that light meters for cameras are calibrated for average exposures through the use of a neutral grey card, they argue that life in the city reduces urbanites to a range of typical or average experiences lacking full emotional range.
35. Such a technique was perhaps first utilized by Gance in *Napoléon*. It reappears in *Time Code* (Mike Figgis, 2000).
36. Moholy-Nagy, *Painting, Photography, Film*, p. 43. This idea is also emphasized in the reproduction in the 1925 edition of PPF of a photomontage by Moholy-Nagy entitled 'Boxing Match in New York' that depicts a ring and a crowd against a backdrop of skyscrapers.
37. Here the most obvious reference is to the 1935 essay by Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction,' in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1969), pp. 217-51, especially pp. 236-37.
38. Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development*, trans. Barbara Luigia La Penta (Cambridge, Mass.: MIT Press, 1976), pp. 78-103.
39. Siegfried Kracauer, *From Caligari to Hitler: A Psychological History of the German Film* (Princeton, N.J.: Princeton University Press, 1994), pp. 182-89.
40. For a discussion of the parallels between the views of Vertov and Moholy-Nagy see Annette Michelson, 'Introduction,' in *Kino-Eye: The Writings of Dziga Vertov*, ed. Annette Michelson, trans. Kevin O'Brien (Berkeley and Los Angeles: University of California Press, 1984), pp. xli-xlvi. Moholy-Nagy does not appear to cite Vertov in any of his published writings prior to his 1928 essay, 'Problems of the Modern Film' in Kostelanetz, ed. *Moholy-Nagy*, pp. 131-8. There he praises the use of montage in Man With a Movie Camera. Passuth suggests that Moholy-Nagy probably did not know Vertov's films at the time of the first publication of DM in 1924, although he was almost certainly familiar with other Soviet films from the early 1920s (Passuth, *Moholy Nagy*, p. 38). Yet the earliest recorded screening of a Vertov film in Berlin seems to have been a presentation in 1924 of his *Leninist Kinopravda*, and it is not implausible to imagine that Moholy-Nagy might have become acquainted with the filmmaker's work by this date. See Helmut Kresse, '"Russenfilme" in Berlin,' in *Berliner Begegnungen. Ausländische Künstler in Berlin 1918 bis 1933*, ed. Klaus Kändler, Helga Karolewski, and Ilse Siebert (Berlin: Dietz Verlag, 1987), p. 181. The Soviet film director Esfir Schub describes a 1929 meeting between Vertov and Moholy-Nagy in the apartment of the latter in Berlin. See Esfir Schub, 'Die Fahrt nach Berlin 1929,' in *Berliner Begegnungen*, ed. Kändler et al., p. 193.
41. Moholy-Nagy, 'Production-Reproduction,' in Passuth, *Moholy-Nagy*, p. 289.

42. The most perceptive and detailed study of biocentrism in the work of Moholy-Nagy is Oliver Arpád István Botar, 'Prolegomena to the Study of Biomorphic Modernism: Biocentrism, László Moholy-Nagy's "New Vision" and Ernó Kállai's *Bioromantk*,' unpublished Ph.D. diss, University of Toronto, 1998.
43. See Eric Mendelsohn, *Amerika, Bilderbuch eines Architekten* (Berlin: Rudolf Mosse Buchverlag, 1926). Translated by Stanley Appelbaum under the title *Erich Mendelsohn's Amerika 82 Photographs* (New York: Dover, 1993). See page 31 of this edition for the Löneberg-Holm photograph of New York reproduced in DM. Siegfried Kracauer's essay 'The Mass Ornament' that prominently discusses the Tiller Girls appears in idem, *The Mass Ornament: Weimar Essays*, trans. Thomas Y. Levin (Cambridge, Mass.: Harvard University Press, 1995), pp. 75-88, especially pp. 75-79.
44. Nemeskürty, *Word and Image*, p. 66.
45. Passuth argues that Moholy-Nagy's arrival in Berlin in 1920 marked his first encounter with the metropolitan tempo explored in DM. See Krisztina Passuth, 'Moholy-Nagy und Berlin: Berlin als Modell der Metropole,' in *Über Moholy-Nagy*, ed. Gottfried Jäger and Gudrun Wessing (Bielefeld: Kerber Verlag, 1997), pp. 37-44.
46. See Fernand Léger, 'Ballet Mécanique,' in *Functions of Painting*, trans. Alexandra Anderson, ed. Edward F. Fry (New York: The Viking Press, 1973), pp. 48-51. In recent years Léger's authorship of the film has increasingly been cast in doubt. See William Moritz, 'Americans in Paris: Man Ray and Dudley Murphy,' in *Lovers of Cinema*, ed. Horak, pp. 118-36.
47. For a perceptive analysis of the differences between Moholy-Nagy and other Weimar cultural practitioners see Andreas Haus, 'Moholy-Nagy: Sinnlichkeit und Industrie,' in *Avant-Garde und Industrie*, ed. Stanislaus von Moos and Chris Smeenk (Delft: Delft University Press, 1983), pp. 104-20.
48. Moholy-Nagy, *Painting, Photography, Film*, p. 125.

Eisenstein's Philosophy of Film

Noël Carroll

I. Introduction: The Problem

In an early essay, co-authored with Sergei Yutkevich, Sergei Eisenstein celebrates film as the eighth art.[1] Eisenstein and Yutkevich imagine a gathering of the seven classical muses at a sort of board meeting, when suddenly Charlie Chaplin, representing cinema, bursts in and confidently takes a seat on the 'Council of Muses.' This, of course, is an allegory signaling the advent of a powerful new medium, and it expresses a common wish of silent filmmakers and theorists alike: that cinema be accorded the status of art. For it would only be through its recognition as an artform, they thought, that film could command the respect its advocates believed it deserved. Like so many of his contemporaries, Eisenstein was committed to demonstrating that film, or at least certain types of film, could be art. That conviction not only marks his earliest essays, but also preoccupies – even haunts – him throughout his career.

Though this early essay sounds a recurring theme in Eisenstein's writings – the theme of film as art – it is uncharacteristic in at least one respect. It simply asserts that film is art. Chaplin, as cinema, muscles his way into the circle of muses and insolently defies anyone to try to oust him. It is easy to interpret this allegory as saying that in virtue of self-evident masterpieces like Chaplin's there can be no question that film is an art form. It is an established fact, so to speak; it requires no further argumentation, once palpably artistic achievements like Chaplin's are available for all to see.

And this, of course, is probably how film really did become an acknowledged artform. The proof of the pudding was in the tasting. Nevertheless, throughout the first part of the twentieth century, the lovers of film thought more was necessary. It had to be proven that film was an art. And this became a major burden of film theory in general and of Eisenstein's theory of film in particular. Thus, from the brash assertion that film was an art, Eisenstein's subsequent career was obsessed with showing this to be the case.

As I have indicated, this was a frequent theme of early film theory.[2] In this way, Eisenstein resembles most of his contemporary film theorists. Moreover, he also at least *appears* to resemble them in the strategy he employs to establish that film is a discrete art form. It is an art form, presumably because it is expres-

sive. But it is also a *unique* art form, worthy of its own muse. He, like Kuleshov and Pudovkin, seems to argue for this conclusion by hypothesizing that the film medium possesses an essential feature – namely, montage[3] – and that this feature differentiates it from neighboring art forms, notably theater.

Thus, film is not simply canned theater, but something else, an art form in its own right. Eisenstein says, for example, 'The expressive effect of cinema is the result of juxtapositions [montage]. It is this that is specific to cinema.'[4] Unlike theater, cinema juxtaposes photographed representations rather than presenting viewers with continuous enactments in the flesh. The issue in arguments like this, of course, is not simply whether film is an art form, but whether it is an *autonomous* art form – whether it has a distinct range of inherent devices and effects that make it a domain unto itself. For if film were merely a subspecies of theater, it would not merit its own place setting at the Council of Muses. Thus, the project, for Eisenstein and kindred spirits, was not only to establish that film could discharge certain of the functions of art, such as expression, but that it could do so in an inherently distinctive way. And in certain of Eisenstein's writings, 'montage' appears to name just such a differentia; he says, 'We must look for the essence of cinema not in the shots but in the relation of shots.'[5]

On numerous occasions, Eisenstein alleges that montage is built into the very operation of the cinematic mechanism; it is, he maintains, the basis of the impression of movement in the single shot.[6] On Eisenstein's account, as slightly different frames pass the projector beam, they give rise in the spectator's mind to the appearance of movement. That is, the juxtaposition of two discrete still frames brings with it something new – namely, movement. Thus, the *sine qua non* of *moving* pictures is putatively a function of montage.

Moreover, this fundamental feature of the medium, Eisenstein believes, somehow portends the principle that governs higher orders of cinematic representation and expression. The juxtaposition of frames yields the movement in shots. The juxtaposition of shots, then, in turn, provokes further 'new things' in spectators, including emotions, comparisons, narratives, metaphors, chains of reasoning, and so on. Movement, which differentiates film from painting and sculpture, is a consequence of montage juxtaposition. The montage juxtaposition of shots, then, differentiates film from theater. Montage juxtaposition – the principle that makes cinema cinema, and is a basic feature of the medium – guarantees that film can be a unique art form, insofar as filmmakers cultivate its proclivity for montage.

Whether or not this line of argument can be sustained without riding on embarrassing equivocations (I, for the record, think it cannot be), if it nevertheless reflects Eisenstein's thinking, then it *appears* to place him squarely in an immediately recognizable philosophical tradition, one popularized by

Lessing in his *Laocoön*,[7] and massively influential on subsequent generations of art theorists, especially film theorists. According to this view, in order to establish that something possesses the capacity to be art, one must show that, in virtue of its medium, it has the potential to discharge the general function of art in a unique way.

Lessing thought that the generic function of art was representation. And for him, poetry and painting were autonomous art forms since poetry in virtue of its medium (words in *sequence*), was most suited to rendering events, whereas, painting in virtue of its medium (*adjacent daubs* of pigment), was most suited to representing states of affairs. For Eisenstein, montage juxtaposition, construed narrowly as film editing, defines the fundamental principle of the film medium. This, then, not only putatively shows that film could do some things beyond the reach of other art forms, but also suggests the path filmmakers should take if they desire to explore the possibilities of film as an autonomous art and to engage audiences in the ways most suitable to the medium.

As already intimated, this interpretation of Eisenstein makes him sound like other well-known film theorists who emphasize the specificity of the film medium, such as Rudolf Arnheim, André Bazin, Siegfried Kracauer, and others. And undeniably, passages in Eisenstein can be marshaled to support this interpretation of his approach to theorizing. Undoubtedly, this is why Eisenstein is often characterized as a medium-specificity theorist, especially in introductory texts.[8]

However, categorizing Eisenstein in this light does not sit well with other aspects of his theorizing. This is immediately apparent when one considers the way in which Eisenstein's writings abound with analogies between montage in cinema and examples of supposedly comparable phenomena in other art forms. The list of writers Eisenstein believes exemplify montage principles seems virtually endless, including Joyce, Dickens, Gorky, Pushkin, Balzac, Zola, Whitman, Homer, Mallarmé, Gogol, and Tolstoy. Indeed, cinematic montage is not only analogized to the strategies of particular writers, but to the principles underlying whole literary genres, like the haiku, and to whole written languages, such as Japanese ideographic writing. But if montage is also so fundamental to literature, how can it be specific to cinema?

Nor do Eisenstein's boundless analogies undermine only the border between cinema and literature. For Eisenstein energetically seeks out and develops analogies between cinematic montage and ostensibly cognate practices in all the other arts. With respect to theater, Kabuki exemplifies montage. Scriabin and Debussy are montagists of music. In painting, there are Serov and da Vinci. In terms of sculpture, Eisenstein cites as instances of montage the Stations of the Cross in Amecameca, Mexico, Bernini's Barberini coats of arms, and the Greek statue *Laocoön*. The Acropolis and Hagia Sophia are architec-

tural montage. The acting of George Arliss also exemplifies montage. And Eisenstein himself uses montage construction to choreograph his own miniature ballet The Last Conversation.[9] And so on. But once again, if montage is fundamental across the arts, in what sense can it be the essence of cinema?

Another way to see the problem here is to note that though Eisenstein appears initially to apply the notion of montage narrowly to editing – to the succession of *different* shots (hence the notion of juxtaposition) and *different* frames – as his theorizing proceeds, the concept of montage expands in its reference; montage applies not only to interrelationships or articulations between shots, but to relations within single shots (to the juxtaposition and disposition of elements within the frame), to relations between sound and image, word and image, color relationships, and so much more. Eisenstein says 'montage pervades all "levels" of film making, beginning with the basic cinematic phenomenon, through "montage proper" and up to the compositionality of the totality of the film as a whole.'[10] Yet surely if montage can instantiate such abstract levels of compositionality, it will not be cinema-specific. Even acting is governed by montage, according to Eisenstein.[11] But then how will montage differentiate film from theater?

In fact, matters are even worse than I've so far let on. For it turns out that montage is not only a feature of all the arts. It is also a common feature of human thought. So, one fears that not only will invoking montage fail to differentiate cinema from the other arts; it will also fail to differentiate cinema from much human thought that is not artistic. That is, talk of montage will not only be useless in establishing that cinema is an autonomous art; it will also be useless in arguing that cinema is an art form at all, since montage exemplifies ordinary thought processes that may have nothing to do with art.

Once, that is, the idea of montage gets this broad, it is more or less predictable that it cannot be localized as a feature specific to the film medium. Quite simply, for example, if montage is the recommended principle for arranging objects in the pictorial space of a single shot, then it should obtain in static as well as moving arrays – such as paintings. And if montage construction is a customary mode of thought, then it hardly specifies cinema. So how can Eisenstein claim that 'montage is at its most specific and significant as a method of influence in the field of cinema'?[12]

There is, in short, an apparent contradiction at the heart of Eisenstein's philosophy of film. On the one hand, he appears inclined to hold that montage is the essence of cinema – that it is somehow specific to cinema in a way that warrants the claim that film is not only art, but also an autonomous art. Yet on the other hand, montage is something shared by all the arts as well as being a recurring mode of ordinary thought. These two views appear incompatible. Cinema cannot be an autonomous art in virtue of montage if montage is a feature

of all the other arts. Indeed, how can cinema even be said to be an art in virtue of montage if montage thinking is not unique to the arts?

It is the purpose of what follows to attempt to resolve these tensions.

II. A Digression: Different Approaches to the Philosophy of Art

Before grappling directly with Eisenstein's philosophy of film, it will be instructive to reflect a little upon different approaches to the philosophy of art. This is so for two reasons: first, film theories often presuppose a philosophy of art; this, of course, is most obvious in theories that identify cinema as an artform. Second, and perhaps more importantly, film theories often imitate the structures of philosophies of art. That philosophies of art can have different structures, moreover, may be key to unraveling Eisenstein's ostensible confusions, since the appearance of contradiction in this case may be a function of our supposing that Eisenstein is employing one philosophical structure when, in fact, he is employing another.

Broadly put, for our purposes, philosophies of art can take at least two forms. For convenience, let us call them the Differentiation Structure and the Exemplifying Structure. Historically, I would guess that the Differentiation Structure is more common. It might also be called the definitional approach. It defines art in terms of the property or properties that all artworks have in common *and* in terms of the property or properties that mark off artworks from everything else.

Had Clive Bell been right, the defining property of art would be significant form.[13] For Bell, significant form is a property had by all and only artworks. Stated in traditional philosophical jargon, in this example significant form is both a necessary condition (all artworks possess significant form) and a sufficient condition (only artworks possess significant form) for art status. I call this approach the Differentiation Structure, because I want to emphasize the way in which it functions to hive art off from everything else.

The Differentiation Structure can be implemented in the language of necessary and sufficient conditions. But a definition may also be framed in terms of the format of species and differentiae. Since this method was introduced by Aristotle, let us use one of his examples here: humans are rational animals. That is, humans are defined as belonging to the species of animals, but they are distinct from other creatures in that species in virtue of their rationality. Rationality is the difference or differentia that separates humanity from the rest of the animal kingdom.

Philosophies of art can also take this form. Leo Tolstoy defines art as the communication of feeling. Communication is the species in this case. Not only art but also language falls under this category. But for Tolstoy, the differentia that demarcates the boundary between art and language is putatively feeling. Whereas language, according to Tolstoy, communicates ideas, art communicates feeling. This is not a good theory of art. But it illustrates the differentiation approach nicely. From our perspective, what is most significant about it is that it demonstrates the commitment of the differentiation approach to distinguishing art from other things, most especially its near neighbors.

The task of a philosophy of art, in the differentiation mode, is crucially to draw a distinction between art and everything else. Optimistically, this may also yield an account of the special or unique value of art in contradistinction to that of other practices, such as religion, politics, morality, science, and so on. But in any event, an indispensable goal of this strategy of analysis is to differentiate art from other things.

I would suspect that most film theories in the classical tradition rehearse something like the Differentiation Structure in their definitions of the nature of film. Given the circumstances of early film theorists, this is understandable. Their task, as they saw it, was to win a place for film in the circle of the muses. In order to do this, they naturally attempted to show that cinema was a unique art form, one with its own special virtues; in particular, they were anxious to prove that it was distinct from theater. Quite frequently they attempted to get at what was unique about film by citing specific features of the medium and their correlative effects. They were interested in differentiation. So they pointed to features of cinema, like edited space and time, that ostensibly differentiate it not only from normal perceptual experience, but from theater as well.

Because so many montage theorists, including Kuleshov and Pudovkin, appear to be employing the Differentiation Structure, it is tempting to read Eisenstein as playing in the same ballpark. And, of course, as we've seen, he sometimes writes as though he is in the differentiation business. But interpreting Eisenstein in this way is what earlier landed us in a contradiction. If Eisenstein means montage to differentiate cinematic art from everything else, then why does he constantly advertise that the montage principle can be found everywhere else – not only in every other art form, but in ordinary mentation as well? That is surely a self-defeating way to stake out the pristine domain of film art.

However, the problem here may be that we have been too hasty in supposing that Eisenstein is attempting to characterize film art in virtue of the Differentiation Structure. That is, appearances – or certain passages – notwithstanding, perhaps Eisenstein is not interested in isolating film as an utterly discrete

art form. But if he is not interested in that, how can he hope to characterize film art? Doesn't that just require saying how it is different from other things?

At this point, it pays to recall that the Differentiation Structure is not the only method for characterizing things such as art. There is also the Exemplifying Structure. Maybe, unlike most other classical film theorists, Eisenstein is not adhering to the Differentiation Structure in propounding his philosophy of film, but rather to the Exemplifying Structure.

The Exemplifying Structure is less common in the philosophy of art than the Differentiation Structure, but it does appear with some frequency. Whereas marking the boundary between art and other things is indispensable to the differentiation approach, the exemplifying approach tracks features that art shares with other things, but which art possesses with heightened clarity or intensity. The significant thing about art on this approach is that it makes something common stand out with uncommon lucidity, pronounced focus, and arresting unity.

Consider, for instance, Benedetto Croce's theory of art as intuition.[14] For Croce, art exemplifies a common function of the human mind, but one operating at a higher level of articulateness and synthesis than usual. In the normal run of events, the percipient is confronted by a jumbled welter of stimuli. In virtue of what Croce regards as our faculty of intuition, we forge representations of this buzzing confusion, imbuing it with a particular form. What a painter does is roughly the same thing, but with a greater degree of perspicuity and unity.

The painter, employing the same faculty of intuition that non-artists possess, gives the chaotic stimuli of a storm-tossed sea a particular, unified, and unique form in his representational painting. And this, in turn, affords the rest of us a more articulate degree of intuitive knowledge. But what is important to notice here is that, according to Croce, the painter is not doing something categorically distinct from what the rest of us are doing all the time. The painting is simply an arresting example of the universal process of acquiring intuitive knowledge. Art, on this view, exercises and reflects a common process of mentation, one that has its roots in generic human nature. Art is part and parcel of a kind of cognition everyone employs ordinarily and incessantly. But art exemplifies this cognitive process at a higher level of achievement than is customary.

What we might call aesthetic activity is, then, a fundamental capacity of the human mind. Art is an occasion for the exercise of that capacity with respect to a particularly clarified instance. It is an intuitive expression that exemplifies the form-giving powers of the mind in response to the otherwise dizzying array of stimuli that accost us. What is important in this characterization of art is

what art shares with other things, namely, standard-issue cognition of the intuitive variety.

Here the significance of art is a matter of degree, rather than of kind. That is, the exemplifying approach connects art with common processes, showing that art is not at root different from, in this case, ordinary experience, but continuous with it. This not only has the advantage of explaining the accessibility of art, but also gives art a distinguished role in exercising and enhancing our intuitive powers – our capacity to recognize and/or to forge form and unity – as well as manifesting those powers limpidly and reflecting them, thereby delivering a quotient of self-knowledge to us through an opportunity for self-reflection.

Croce, of course, is not the only aesthetician to deploy the Exemplifying Structure in his philosophy of art. John Dewey's notion of art as experience is also a case in point, since the kinds of experiences that Dewey has in mind are not categorically distinct from ordinary experiences, but are only experiences that are more unified qualitatively and temporally, more consummatory, and more vivid than other experiences.[15] For Dewey, the relevant experiences – artistic or aesthetic experiences – exemplify the latent structure of all experiences, as revealed by the very best experiences (the experiences of which we are wont to say, 'Now that was an experience'!).

Nor do we find instances of the Exemplifying Structure only in the twentieth century. Arguably Johan Christoph Friedrich von Schiller's conception of art as play is also an example, since the concept of play he relies upon is that of freely giving form to nature.[16] That is, art, in this regard, celebrates the freedom that the human mind possesses through its capacity to give rule to and to shape the natural world. In this, art is on a continuum with the sort of constructive activity or play of the imagination that Idealists regard as the hallmark of cognition. Art, in this respect, is both an occasion to exercise those cognitive powers and an emblem of them, particularly as a symbol – an exemplum – of the freedom of those mental powers from brute, deterministic nature. Art as play is only a pronounced example of generic human cognitive powers.

Of course, there is little point in an essay of this sort to counting off the roster of philosophers of art who favor the exemplifying approach. That there are at least these three is enough to support the claim that there is such a structure for aesthetical philosophizing.

Moreover, the Exemplifying Structure has certain benefits. By indicating how art has roots in common human nature, it is in a position to explain why art is accessible (it is connected with quotidian experiences) and why it is so widespread (it derives from something bred in the bone – or, at least, in the cognitive-perceptual system). The approach can also suggest why art is impor-

tant: it exercises our powers at the same time that it makes those powers transparent to us. And it also gives art a high place of honor in the court of the mind as an emblem of distinctive features of human mentation.

That is, the exemplifying approach attempts to characterize art by saying what is important about art by connecting art to other forms of significantly human activity of which it is a privileged example. The essence of art is that it exemplifies essentially human powers. That is why we are interested in it. Like the mirrors in a ballet studio, it holds a looking glass up to us at the same time that it cultivates our talents through exercise. Perhaps not everything we are willing to call art has this tendency. Maybe the exemplifying approach really identifies only the highest calling of art. Nevertheless, identifying the highest calling of art is a way of characterizing art in a manner that promotes understanding.

Philosophies of art, then, can, at the very least, employ the Differentiating Structure or the Exemplifying Structure.[17] The former separates art from other things; the latter connects it to other things. It is not the purpose of this paper to say which of these approaches is more philosophically advisable or even whether either of them is. Rather, the point is that philosophies of art have been observed to instantiate at least these two different structures. Furthermore, film theories frequently recapitulate the structures of philosophies of art. Consequently, we might expect that in addition to finding film theorists who model their views on the Differentiating Structure, there will also be film theorists who rehearse the Exemplifying Structure.

Possibly Eisenstein is one. If he is, then that would explain why he finds montage everywhere, not only across the arts, but also in the recesses of the human mind. It would account for the urgency of his desire to connect cinema as montage to all sorts of artistic thinking in particular, and to deep processes of human perception, emotion, and understanding in general.

The apparent contradiction in his writing noted earlier, would disappear if it turned out that the significance and specificity Eisenstein claims for montage cinema is not supposed to be of the categorically distinct sort championed by medium-specificity theorists, but is instead a matter of degree, as one would anticipate were Eisenstein theorizing on the model of the Exemplifying Structure. Recall that previously we quoted Eisenstein saying, 'montage is at its *most* specific and significant as a method of influence in the field of cinema.'[18] Certainly the qualification 'most' here makes it sound as though he is talking about degrees of specificity and significance relative to other similar things.

Needless to say, what I have done so far is merely to have located a logical opportunity that Eisenstein might have for evading charges of self-contradiction. It remains to be seen whether the text grants him this loophole.

III. Eisenstein's Philosophy of Montage Cinema

Despite his perhaps confusing uses of the notions of specificity and essence with reference to montage in cinema, Eisenstein is quite clearly committed to, as he puts it, 'the thesis that the principle of montage is common to all the other arts.'[19] At times, Eisenstein suggests that the continuity of cinema with the other arts is a matter of cinema's incorporating the other arts – as if what is specific to film is that it is the art form in which all the other art forms meet.[20] Eisenstein also sometimes gives this notion an evolutionary spin. He says, 'cinema is the contemporary stage of theater. The next consecutive phase.'[21]

That is, the accumulation of artistic techniques in cinema is not happenstance. For Eisenstein, it is a process of maturation, united according to a principle, the exfoliation of montage. Moreover, it is only with the advent of montage in film that this process of growth and its underlying principle become evident. Eisenstein writes, 'art first becomes acquainted with the principle of montage to its full extent at the cinema stage.'[22] Just as for Hegel consciousness comes in stages to greater and greater levels of self-awareness of its own nature, so for Eisenstein art reaches its highest stage (to date?) of self-awareness with film, the moment when its fundamental feature, montage, can be grasped with utter clarity.

Montage is the essence of art – perhaps in the sense that it is the most important general feature of art (or of the very best art?). This immanent essence only becomes apparent through a historical process, one that culminates with cinematic montage. Cinematic montage exemplifies this essence in a particularly luminous and forceful way. It is in this respect that the montage principle of all art is most specific in cinema. It is not that cinema uniquely possesses montage, but rather that montage in cinema is the most articulate and pronounced specification of the montage principle that governs all the arts.

Cinema is art – Charlie deserves to be a muse – because it is governed by the montage principle that governs all the arts or all the very best art (and even if it pertains to only the very best art, Charlie would still obviously have claim to a place at the table). Montage is specific to cinema in the sense that cinema exemplifies the principle to the highest degree of all the arts, and not because montage is medium specific.[23] Moreover, cinema is not merely an example of montage, it is the most illuminating, penetrating, and comprehensible example, one so clear and pronounced that it enables us to see what art was about all along. Cinema is an (the?) exemplary art, a microscope through which we can dissect and analyze the nature of art.

Eisenstein's philosophy of film, then, manifests what was earlier called the Exemplifying Structure rather than the Differentiating Structure. This is why,

despite appearances, his endless analogies to other art forms do not contradict his claims about montage as the essence (in the exemplification sense) of cinema. Of course, our exposition so far may leave the nagging feeling that something is missing. Even if cinema is art in virtue of its exemplary possession of the all-art principle of montage, what is so significant or valuable about montage – montage in cinema and montage in the other arts?

Answering that question, needless to say, requires a philosophy of art, not just a theory of cinema. And Eisenstein has one. Moreover, his philosophy of art, from our perspective, is particularly interesting since like his philosophy of film, it follows the exemplifying approach rather than the differentiation approach.

But what does montage exemplify? With reference to film, Eisenstein says, 'Cinema *seems to us* by its specific character to reproduce phenomena according to all the indications of the method that derives from the reflection of reality in the movement of the psychic Process.'[24] Montage, that is, exemplifies the operation of the human mind; Eisenstein understands 'montage form as the reconstruction of the thought process.'[25] He says that, 'montage thinking is inseparable from the general content of thinking as a whole.'[26]

Throughout his career, Eisenstein offered different characterizations of the thought processes relevant to montage. These range from reflex associations to dialectical reasoning, inner monologue (stream of consciousness),[27] inner speech, primitive thinking (Levi-Bruhl), and unconscious associations (Freud).[28] Sometimes he thinks of it more broadly (but inaccurately) as 'conventional deduction,' or what he calls (maybe more accurately) generalization,[29] or generalization fused with emotion.

That is, Eisenstein sees montage as modeled on garden-variety inferential processes, as well as suggesting more arcane mental operations that it might reflect and engage. Because Eisenstein explores different models of mind in different phases of his career, commentators have been interested in charting these shifts.[30] However, for our purposes it is more useful to notice a common theme in all of Eisenstein's divagations on psychological operations – namely, that montage in art and cinema reflects human thought processes in a way that is exemplary.

But what is so important about exemplifying mental processes? For Eisenstein, it is a way of directing the thought processes of the audience. For, like Tolstoy, Eisenstein believes that the spectator, in viewing the work, recapitulates the artist's mental process of making it. In this way, the artist can engender in the audience the same mental states – both cognitive and affective – that she underwent in shaping her material, thereby investing the viewer with a certain way of thinking about and feeling toward whatever the theme in question might be. Eisenstein writes:

> The strength of montage lies in the fact that it involves the spectator's emotions and reason. The spectator is forced to follow the same creative path that the author followed when creating the image. The spectator does not only see the depicted elements of the work; he also experiences the dynamic process of the emergence and formation of the image in the same way that the author experienced it. This is as close as it is possible to conveying visually the fullness of the author's thought and intention, to conveying them 'with the same force of physical perception' with which they faced the author in his moments of creative vision.[31]

By exemplifying a thought process, that is, the montagist is able to direct the thinking of the audience. Montage releases or mobilizes or triggers mental processes in the audience, but not in any random way. *Ex hypothesi*, montage is a means of guiding the mental processes of the audience – specifically, the audience's mental processes will putatively take the same creative pathway as the author's. The thought processes the montage exemplifies will stimulate cognate thought processes in viewers. Exemplification, for Eisenstein, is connected to stimulation.

As a political filmmaker, Eisenstein had a lifelong interest in influencing the minds of viewers in ways that would enable them to adopt what he took to be the appropriate perspectives – both cognitive and emotional – towards the relevant subject matter. He took his task to be 'a matter of producing a series of images that is composed in such a way that it provokes an affective movement which in turn triggers a series of ideas. From image to emotion, from emotion to thesis.'[32] Montage is an eminently serviceable means to this end. For a montage construction will exemplify the thought processes of the artist toward a given subject matter which, in turn, will supposedly be duplicated in the experience of the viewer.

Given the perhaps questionable hypothesis that audiences reproduce the same mental states the artist underwent, the importance of Eisenstein's conviction that montage exemplifies thought (infused with feeling) is crystal clear. The artist's thinking about a subject is exemplified by the montage, a mechanism that then elicits the same way of thinking and feeling about the subject in the viewer.

Nor need this be thought of in terms of brainwashing the viewer. Rather, reading Eisenstein charitably,[33] montage is a mode of exercising the cognitive and emotive powers of spectators in a way that expands those powers by putting them to work. Montage is about adding something to what is given. That is, intellectually the spectator retravels the same *creative* route the artist did. This is a maieutic process,[34] not a process of mechanical pre-programming. Exemplification is not merely stimulation, but also education, building on ways audiences already think and feel by augmenting and refining them in new di-

rections. Montage is pedagogical because, by exemplifying new ways of thinking and feeling – new ways of connecting, configuring, and unifying input – it enhances the audience's cognitive, affective, and cognitive-affective abilities. Moreover, it can do this precisely because montage exemplifies psychological states and processes that the audience then can take on board, thereby elevating their own capabilities.

Cinema is art because it exemplifies in the most perspicuous way the principle of montage, which is an essential feature of art. This feature of art, in turn, explains the importance of art, since montage exemplifies mental processes. This is significant because by exemplifying mental processes, artists can transmit superior ways of thinking, feeling, and thinking-and-feeling about the world to audiences – audiences who will recapitulate the mental processes exemplified in artistic montages in their own experiences of the work in question.

These superior ways of thinking are not alien ways. They grow out of mental capacities that the artist shares with the audience, but which the artist is more adept at implementing. Thus, commerce with montage putatively improves the audience by extending the mental powers it already possesses through the directed exercise of them. Eisenstein most frequently talks about this pedagogical potential of montage with regard to political thinking and feeling; however, it is not clear that the aesthetic framework he employs need be so restricted.

But, in any event, enough has been said to support the plausibility of the hypothesis that in both his philosophy of film and his philosophy of art Eisenstein employs the exemplifying approach to characterizing the relevant phenomena rather than the differentiating approach. This is not suggested in order to defend the truth of either of his theories, but rather to remove the apparent contradiction that arises if we take Eisenstein to be claiming to isolate montage as what is utterly unique about cinema at the same time that he emphatically equates montage with something common to all the arts and much ordinary thinking. There is no logical problem here (though there are probably more substantive ones), because Eisenstein's project is to characterize film, art, and film art in terms of what they exemplify with uncommon clarity, rather than in terms of what belongs to them alone. He is more concerned with what is significant about film and art than with what is unique to them.

Moreover, it is also interesting to observe that Eisenstein not only employs the Exemplifying Structure in his characterizations of film and art, but also appropriates some of the recurring themes of philosophers who typically favor this structure. That is, he not only converges on the structure found in philosophers such as Schiller, Croce, and Dewey, but, using his own idiosyncratic language, he appears to embrace some of the content of their views. And this too,

then, should support our interpretation of Eisenstein as what we might call 'an exemplifier.'

Many of the philosophers who claim that what is important about art is that it exemplifies thought, emphasize that it is the constructive powers of the mind that are at issue here. This is Eisenstein's tack as well. For him, 'cognition is construction.'[35] That is, montage in art and cinema exemplifies and exercises the constructive powers of the mind, notably its capacity to synthesize or unify disparate elements into novel configurations. Montage appeals to the unifying disposition of the mind and 'exploits our tendency to "unify" skillfully presented fragments into an image or concept...'[36]

Montage celebrates, exemplifies, exercises, and thereby improves the powers of the mind to go beyond what is given to it. Montage is significant because it exemplifies the creative resources of the mind and, by doing so, bequeaths an added measure of creativity to its audiences, expanding maieutically their already constructively disposed mental powers through the presentation of concrete examples. As in Schiller, Croce, and Dewey, so in Eisenstein, the artistic principle – which he calls montage – accentuates the form-giving, unifying, organicist, creative-constructive aspects of the mind in a manner that not only reflects its operation, but promotes its increasing development.

A concept that Eisenstein does not employ, but that seems to me to be in the background of his theorizing, is the imagination. Eisenstein writes:

> A work of art, understood dynamically, is also a process of forming images in the mind of the spectator. Herein lies the peculiar quality of every genuinely vital work of art, which distinguishes it from a lifeless piece of work in which the spectator is presented with a depiction of the *results* of a certain past creative process instead of being drawn into a permanently occurring process.[37]

There are two elements in this quotation that remind one of classical accounts of the imagination: first, that the imagination is involved in forming images, and second, that the imaginative process is one of active creation and construction, a matter of going beyond the given. At the risk of sounding reductive, it seems reasonable to speculate that for all his various strategies for talking about mental processes, Eisenstein's commitment to montage is a commitment ultimately to the imaginative powers of mind – to art's capacity to both exemplify and engage the constructive imagination productively.

This, of course, would place Eisenstein in a broadly neo-Kantian lineage of aesthetics, the lineage to which most other nineteenth- and twentieth-century exemplifiers also belong. Consequently, that Eisenstein appears roughly to share certain thematic biases with those who employ the exemplifying approach to characterizing art supplies a corollary reason to hypothesize that the structure of his philosophies of art and film are guided by the Exemplifying

Structure rather than the Differentiation Structure. And if that is so, the appearance of self-contradiction that initiated this investigation has been successfully dissolved.

IV. An Objection

We have been wrestling with an apparent problem in Eisenstein's writings. On the face of it, his project is to tell us what is special about cinema, and why that specialness should convince us that film is an artform. Montage seems to be his answer. But then he goes on to analogize cinematic montage with every other artform, and with human thought as well. Yet how does this tell us what is special about film, if montage in film does not differ in kind from the principles that govern all the other arts and the human mind to boot? Eisenstein's analogies seem at odds with his purposes. Our solution to this ostensible inconsistency has been to interpret Eisenstein's philosophy of film not as an example of the differentiation approach for characterizing film art, but rather as an instance of the exemplifying approach.

However, some might prefer an alternative interpretation. They will agree that Eisenstein's theory does not abide by the Differentiation Structure, but will go on to claim that it is not a case of the Exemplifying Structure either. Rather, Eisenstein's analogies with the other arts show that he is attempting to establish that film is an art by what Wittgensteinians will later come to call the method of family resemblances. That is, Eisenstein is demonstrating that film can be an art by showing that some films resemble established artworks and/or art forms in various respects. Moreover, these respects are quite diverse and cannot be reduced to a single theme, such as 'exemplifying thought.'

This is not an unknown strategy for advancing the cause of film art. It is the primary strategy of Vachel Lindsay, for example, in his *The Art of the Moving Picture*. In the chapters 'Sculpture-in-Motion,' 'Painting-in-Motion,' and 'Architecture-in-Motion,' Lindsay draws multiple, non-overlapping analogies between film and the established arts.[38] The point of these analogies is that some films, namely the ones that are appreciably like already acknowledged art, have a legitimate claim to art status. Why not suppose that Eisenstein's analogies are intended to function argumentatively in the way that Lindsay's do?

Nevertheless, the question here is not whether Eisenstein could have proceeded to defend the artistic credentials of film in this manner, but, rather, did he? I think that this is unlikely. Speaking of his own practice of analogizing, he indicates that it 'is the discovery of similarity in *methods* and *principles* of differ-

ent arts corresponding to the psychological phenomena that are identical and basic to all art perceptions...'[39] Quite clearly, Eisenstein is not concerned with any family resemblance or similarity between filmic montage and established artworks, but only those that meet a certain condition – that they exemplify certain, psychological phenomena, namely, what we have referred to broadly as the imaginative powers of the mind. Thus, insofar as the analogies Eisenstein thinks are relevant to establishing the artistic status of art are condition-governed, he cannot be interpreted as favoring the family resemblance approach rather than the differentiation approach. Eisenstein was not a Wittgensteinian *avant la lettre*. A better interpretation is that he was an exemplifier.

V. Conclusion

Because his aims – the desire to prove that film is an art – seem similar to that of other classical film theorists, and because his language also often echoes theirs – his talk of specificity and essence – it is easy to think of Eisenstein's film theory as another example of the differentiation approach. Like Arnheim, he appears dedicated to proving that film can be art in virtue of its distinctive features (which for Eisenstein amount to its montage capabilities). But this interpretation of Eisenstein's writings – however much he sometimes invites it – makes a logical mess of much of his writing. For a great deal of his energy is spent there in demonstrating through countless analogies how montage is also an animating of principle of all the other arts and much non-artistic thinking as well.

In order to relieve this tension, we have explored the possibility that Eisenstein's philosophy of film adheres to a different structure for characterizing the nature of film than do many other classical film theories – the Exemplifying Structure, rather than the Differentiation Structure. One consequence of this interpretation is, of course, that classical film theories do not all have the same structure – indeed, not even all those classical film theories devoted to demonstrating that film is an art form have the same structure.

Eisenstein, an original in so many other ways, also pioneered an alternative strategy for doing film theory. What seems like a contradiction in his theory of film is really a symptom that he is approaching the problem of film art in an unfamiliar way. The details of his theory aside – many of his conjectures seem ad hoc – the recognition that his philosophy of film differs from most others provides us with the opportunity not only to rethink the structure of classical film theory, but to engage underexplored avenues of theoretical research – es-

pecially the question that I think was paramount for Eisenstein, of why film is important.[40]

Notes

1. Sergei Eisenstein and Sergei Yutkevich, 'The Eighth Art: On Expressionism, America and, of course, Chaplin,' in *S.M. Eisenstein: Selected Works*, vol. 1, *Writings, 1922-1934*, ed. Richard Taylor (London: BFI Publishing and Indiana University Press, 1988), p. 29.
2. For discussion of this point, see Noël Carroll, *Philosophical Problems of Classical Film Theory* (Princeton, N.J.: Princeton University Press, 1988), especially chapter one.
3. Eisenstein explicitly regards 'the montage approach as the *essential*, meaningful, and sole possible language of cinema.' See Sergei Eisenstein, 'The Montage of Film Attractions,' *Writings 1922-1933*, p. 46 (emphasis added).
4. Sergei Eisenstein, 'Bela Forgets the Scissors,' *Writings 1922-1934*, p. 80.
5. Ibid., p. 79.
6. See, for example, Sergei Eisenstein, 'The Dramaturgy of Film Form,' *Writings 1922-1934*, p. 173.
7. Gotthold Ephraim Lessing, *Laocoön: An Essay on the Limits of Painting and Poetry* (Indianapolis: Edward Allen McCormick, 1962).
8. Warren Buckland, *Teach Yourself Film Studies* (London: Hodder and Stoughton Ltd., 1998), p. 25. In the spirit of full disclosure, I should also confess that this is how I interpreted Eisenstein for many years.
9. Working with the Bolshoi dancers Susana Zviagina and Konstantin Richter, Eisenstein choreographed *The Last Conversation* in 1947. A documentary video on the ballet and its reconstruction by dance historian Sally Banes, *The Last Conversation: Eisenstein's Carmen Ballet*, is available from Artworks Video. See also: Sally Banes, 'Eisenstein Cuts Carmen: Montage in *The Last Conversation*,' *Proceedings of 'Past Masters: Eisenstein and Brecht' Conference*, Center for Performance Research, Aberystwyth, Wales, 1998.
10. Sergei Eisenstein, 'Laocoön,' *S.M. Eisenstein: Selected Works*, vol. 2, *Towards a Theory of Montage*, ed. Michael Glenny and Richard Taylor, trans. Michael Glenny (London: BFI Publishing, 1991), p. 109.
11. Sergei Eisenstein, 'Montage 1938,' *Towards a Theory of Montage*, p. 311.
12. Sergei Eisenstein, 'An Attack by Class Allies,' *Writings 1922-1934*, p. 264.
13. In this essay, many theories of art, like Bell's, will be cited for illustrative purposes. Since this is an interpretive paper rather than a critical one, the reader should not assume that I think any of these theories, including Eisenstein's, is true. This article is an exercise in the interpretive history of ideas and not a contribution to the philosophy of either film or art.
14. Benedetto Croce, *The Aesthetic as the Science of Expression and of the Linguistic in General*, trans. Colin Lyas (Cambridge: Cambridge University Press, 1992).
15. John Dewey, *Art as Experience* (New York: Capricorn Books, 1934).

16. Johnan Christoph Friedrich von Schiller, *On the Aesthetic Education of Man*, trans. Elizabeth M. Wilkinson and L. A. Willoughy (Oxford: Clarendon Press, 1962).
17. The hedge – 'at the very least' – is designed to concede that there may be other structures. Indeed, I think there are, though two is enough for our purposes.
18. Emphasis added.
19. Sergei Eisenstein, 'An Attack by Class Allies,' p. 264.
20. The idea that cinema might be characterized as the art form that incorporates all the others has more recent proponents as well, though they state the matter in terms of cinema's distinctive character in virtue of its incorporation of the *codes* of the other arts. See: Christian Metz, *Language and Cinema* (The Hague: Mouton, 1974); and Søren Kjørup, 'Film as a Meetingplace of Multiple Codes,' in *The Arts and Cognition*, ed. David Perkins and Barbara Leondar (Baltimore: Johns Hopkins University Press, 1977), pp. 20-47. At least from the viewpoint of the differentiation approach, the problem with characterizing film this way is, of course, that it is too historically contingent. How long will it be before some other medium comes along that not only incorporates all the other arts but film as well? Arguably, this has already happened with TV, and may very soon be the case, if it is not now already the case, with digital technology. Defining an art form as The Super-Art form cannot stably serve the purposes of the differentiation approach, since the Super-Art form is a moving target.
21. Sergei Eisenstein, 'The Two Skulls of Alexander the Great,' *Writings 1922-1934*, p. 82.
22. Sergei Eisenstein, 'An Attack by Class Allies,' p. 264.
23. Eisenstein attempts to undermine the medium specificity of Lessing by outflanking it. Lessing's leading intuition pump was the Greek statue *Laocoön*. Of it, Lessing alleged it was obvious that static stone was not a medium that could effectively articulate that which occurred in time, such as motion. Eisenstein deals with Lessing's example by dismantling it: he claims that the statue, in fact, in different parts represents different temporal phases of the event, and, therefore, in effect, is a sculptural montage – the motion assembled in the mind of the viewer. One surmises that Eisenstein makes this argument (which admittedly is a bit strained) in order to reject the claims of medium specificity and to argue that the montage principle governs even a statue like *Laocoön*, Lessing's best case. Whether Eisenstein wins this argument is one question. However, that he makes this argument underlines his opposition to the principle of medium specificity in favor of the cross-art principle of montage as the key to aesthetic understanding. See Sergei Eisenstein, 'Laocoön,' pp. 109-202.
24. Sergei Eisenstein, 'Pantagruel Will Be Born,' *Writings 1922-1934*, p. 248.
25. Ibid., p. 249.
26. Sergei Eisenstein, 'Dickens, Griffith, and the Film Today,' *Film Form*, trans. and ed. Jay Leyda (New York: Harcourt, Brace & World, 1949), p. 234.
27. See Sergei Eisenstein, 'A Course in Treatment,' *Film Form*, pp. 84-107. For commentary, see Annette Michelson, 'Reading Eisenstein Reading *Capital* (Part 2),' *October* 3 (Spring 1977), pp. 86-87; and Annette Michelson, 'Reading Eisenstein Reading *Ulysses*,' *Art & Text* 34 (Spring 1989), pp. 64-78.
28. In his *The Cinema of Eisenstein*, David Bordwell gives the most comprehensive and fine-grained account of Eisenstein's film theory available in English. He is particu-

larly sensitive to Eisenstein's shifting pursuit of different models of mind. See: David Bordwell, *The Cinema of Eisenstein* (Cambridge, Mass.: Harvard University Press, 1993), especially chapters three, four and five. See also: Vance Kepley, 'Eisenstein and Soviet Cinema,' in *Defining Cinema*, ed. Peter Lehman (New Brunswick, N.J.: Rutgers University Press, 1997), pp. 37-55.

29. Sergei Eisenstein, 'Montage 1938,' p. 297.
30. For example, see David Bordwell, 'Eisenstein's Epistemological Shift,' *Screen* 15, no. 4 (Winter 1975), pp. 29-46.
31. Sergei Eisenstein, 'Montage 1938,' p. 308.
32. Sergei Eisenstein, 'The Principles of the New Russian Cinema,' *Writings 1922-1933*, p. 199.
33. Remember that for Eisenstein the mental pathway that the viewer is disposed to take by the montage is a *creative* pathway. Montage is not simply a matter of pushing the audience's buttons. It draws something out of the spectator in a way that enables the spectator to participate in a *creative* act. Eisenstein says: 'The strength of the montage method lies also in the fact that the spectator is drawn into a creative act of a kind in which his individual nature is not only not enslaved to the individuality of the author but is deployed to the full by a fusion with the author's purpose ....' See: Sergei Eisenstein, 'Montage 1938,' p. 309.
34. Annette Michelson, 'Reading Eisenstein Reading Capital (Part 1),' *October* 2 (Summer 1976), pp. 30-31.
35. Sergei Eisenstein, 'Perspectives,' *Writings 1922-1933*, p. 155.
36. Sergei Eisenstein, 'Laocoön,' p. 116.
37. Sergei Eisenstein, 'Montage 1938,' p. 302.
38. Vachel Lindsay, *The Art of the Moving Picture* (New York: The Modern Library, 2000). Lindsay also analogizes certain films to the dramatic, lyric and epic forms (pp. 65-66). Nevertheless, I must qualify the claim that Lindsay's method is an example of the family-resemblance method by saying it is his 'primary strategy,' because he also appears to want to draw some medium-essential distinctions in his chapter 'Thirty Differences Between Photoplays and the Stage' (pp. 104-15).
39. Sergei Eisenstein, 'The Dynamic Square,' *Writings 1922-1933*, p. 210.
40. This essay is deeply indebted to Annette Michelson, to whom I wish to dedicate it. I was first formally introduced to Eisenstein in her classes on Soviet Cinema at NYU – surely the most intellectually bracing experiences I had in my first two years of graduate film study. But I do not merely owe Professor Michelson gratitude for instilling in me a great admiration for Eisenstein in particular and early Soviet Cinema in general. I also owe her the insight upon which this essay is founded.

    Throughout her career, Professor Michelson has had a recurring interest in the relation of film to the mind – film as a philosophical or epistemological toy, as she might put it. Her essays and lectures not only on Soviet film, but on the New American Cinema, Godard, Kubrick, the cinema of Dada and Surrealism, and much else have often returned to the master theme of film as a model for mind. Her interpretive essays have succeeded in demonstrating the importance of this theme for a great many advanced filmmakers. Whether showing analogies between cognitive processes and the design of certain films, like Wavelength (1967), or unconscious processes, in works like Heaven and Earth Magic (1958-

61), she has consistently shown how modeling the mind is an important theme in the history of film.

Had I not had the advantage of Professor Michelson's perspective on the significance of mind/film analogies to the history of cinema, I doubt that I would have been able to reconceive Eisenstein's philosophy of film as I have. I offer this essay as partial repayment for the large debt I still owe her.

Knight's Moves

Peter Wollen

'Experimental film,' 'Pure Film,' 'Underground film,' 'Co-op film,' 'Avant-garde film,' 'Counter-cinema'... How distant all these terms seem from the vantage point of today – how dated, how nostalgic, how difficult to explain. I am afraid that, to make sense of them, I shall have to be shamelessly autobiographical, to go back over forty years or more in order to puzzle out the complex and confusing ways in which the theory and practice of avant-garde cinema developed and changed. 'Memory Lane' is always a treacherous path to follow, but it would be pointless to pretend that I was somehow an outsider looking back dispassionately on the intricate debates that flourished in the world of experimental film, during the 1970s in particular. Of course, these debates did not spring up from nowhere. The form they took was determined by a long previous history going back many decades and also by expectations of the future – this was a time in which I (and others) wrote drafts of guidelines for possible futures under the pretext of theorizing contemporary film practice, looking for alternative ways of filmmaking.

It is futile – probably impossible – to try and define all the distinctions we might like to make between categories such as 'experimental film,' 'avant-garde film,' 'underground film,' 'co-op film,' 'counter-cinema' (my very own contribution) and so on. The history of experimental film is broken and diverse – rather as in Victor Shklovsky's image, it proceeded by knight's moves, going forward much of the time but always obliquely, sometimes aggressive, sometimes defensive according to a strategy that was always difficult to define and second-guess. There are, however, some constants. Experimental film did not develop in an artistic vacuum; as well as its contrasts and connections with the commercial cinema, experimental film also had connections and contrasts with the other arts – painting, of course (itself a visual art), as well as music (another time-based art) and even poetry, particularly 'imagist poetry' but also 'typographic poetry.' In particular, the influence of painting and music often pushed experimental film towards animation as a working method and abstraction as a goal – Eggeling, Richter, Fischinger, MacLaren, the Whitney brothers, and many, many others.

Experimental film has had a long history, spanning the entire twentieth century. At the very beginning of the cinema, every film was 'experimental' in a sense, and it was not until the feature film had fully crystallized that the con-

cept of 'experimental film' began to take on a specific meaning of its own. Basically, the term began to be applied to all those films – and there were not very many of them – which differed in fundamental ways from the majority of films made as commercial ventures, as commodities. Right from the start, experimental films had a limited audience, an audience of aesthetes, intellectuals, and radicals, a dedicated minority who were intrigued, even moved or thrilled, by the new, the unconventional, the difficult, the eccentric, the idiosyncratic. From the start, experimental films had one foot firmly placed in the art world (including the music world and the poetry world) and one foot, a little sheepishly, venturing into the film world, the world of the entertainment business. Experimental filmmakers were the oddballs, the innovators, the aesthetes, the explorers, marginalized but undeterred.

Today we have 'Independent Films,' denizens of a kind of junior league of commercial cinema, designed for a more sophisticated and discerning audience than the blockbusters and star vehicles that dominate the market. But experimental filmmakers had quite different ambitions – their films were designed to be demanding, difficult, even esoteric. From the very beginning they were camp-followers of avant-garde art, aiming to integrate technology with aesthetics, to shake off the derogatory implications of the machine and insist that filmmaking could be as personal and idiosyncratic as music or poetry. From very early on avant-garde film was tied to the art world – Eggeling's abstract Diagonal Symphony (1921), Richter's Rhythmus 21 (1921), Léger's Ballet Mécanique (1924), Man Ray's Le Retour à la Raison (1923), shown at the Dadaist 'Evening of the Bearded Heart,' Duchamp's Anemic Cinema (1926), Buñuel's Surrealist Un Chien D'Andalou (1928), a film itself influenced by René Clair's dadaist Entr'Acte (1924). Buñuel's film was thus connected to the performance world, through Entr'Acte, and to Surrealism, through his admiration for Benjamin Peret. In the 1960s the connection of experimental film with the art world became even stronger, as artists such as Andy Warhol or Michael Snow became filmmakers, returning, in many ways, to the simplicity and the fascination with technique that characterized the very first films.

At the same time, the gravitational pull of the film industry can never be entirely discounted. After all, the Disney studio towered over the world of animation as it still does today and, for a number of filmmakers, making experimental films was a prelude to entering the industry. I am thinking, for instance, of René Clair and of Elia Kazan, who was one of the two actors in Ralph Steiner's Pie in The Sky (1925). Similarly many feature films have managed to bluff their way into the avant-garde canon – Wiene's The Cabinet of Dr. Caligari (1919), Pabst's Secrets of the Soul (1926), Vertov's Man with a Movie Camera (1929), Brecht's and Dudow's Kuhle Wampe (1932),

Buñuel's and Dali's L'Age D'Or (1930), Cocteau's Blood of A Poet (1932), and so on. There is even a case to be made for A Hard Day's Night (1964), inspired by Spike Milligan's absurdist Running Jumping and Standing Still Film (1959), or for the films of European art directors of the 1960s – Godard, of course, but also Rivette, Rouch, Straub-Huillet, Akerman, and several others. In the 1970s there were many filmmakers who set out to make experimental features – the films of Yvonne Rainer, Jon Jost, or even Penthesilea and Riddles of the Sphinx, which I co-wrote and co-directed with Laura Mulvey.

Another neighbor of experimental film has always been the documentary – especially the 'city film,' beginning with Sheeler and Strand's Manhatta (1921) and Ruttman's Berlin, Symphony of a Great City (1927) in the 1920s, then continuing with Vigo's A Propos de Nice (1930) and Ralph Steiner's The City, which was made in 1939. In England, John Grierson worked with Alberto Cavalcanti, the maker of the 1920s classic avant-garde documentary Rien Que Les Heures (1926), producing what we might well call experimental documentaries, such as Night Train (1936), with its voice-over poem written by W.H. Auden working in counterpoint to the rhythm of the film's editing as well as the rhythm of the pistons which drive the train. In his polemical book, *The Struggle for Film*,[1] written in the late 1930s, Hans Richter, best known as an abstract filmmaker, made the case for experimental documentary, on both aesthetic and political grounds. For Richter, documentary was the true vocation of the cinema, as revealed by the first screenings of the Lumière brothers' films of a train entering the station and of workers leaving the factory until eventually documentary blended into the mainstream as a kind of junior partner. The debates on documentary were thrown into confusion after the war by the emergence of a self-confident group of filmmakers who were perceived, by outsiders, as 'underground filmmakers,' but who increasingly saw themselves as an avant-garde in the (by now) classical sense of the term, especially those whose connections were largely with the art world, which also exerted a strong gravitational pull. Indeed, the 'happenings' boom had placed performance right in the vanguard of the art world itself. Moreover, as David James has pointed out,[2] poetry also exerted a significant influence on the film world, from the time of Maya Deren on, as she claimed that her films, and those of others, were poetic and lyrical in their construction, rather than dramatic and narrative-driven, 'vertical,' in her terminology, rather than 'horizontal,'[3] or, as we might put it today, 'metaphorical' rather than 'metonymic.' In 1953, at the Cinema 16 symposium on 'Poetry and the Film,' Parker Tyler (himself a poet) argued that there was a division between short films which worked with 'a Surrealist poetry of the pure image,' and longer films, which accepted the responsibility of storytelling and sought to develop a cinema of 'poetry as a visual-verbal medium.'[4]

It is in this context that Stan Brakhage – many years later – could say that 'Like Jean Cocteau, I was a poet who also made films.'[5] What becomes clear from all these disparate connections – film and visual art, film and music, film and document, film and poetry – is that film is inevitably multi-faceted, its potential can be developed in many different ways. Put simply, there can be no distinct ontology of film, only a range of possibilities. Perhaps Artaud was right when he suggested that at one end of the scale there was the commercial film, in which the world was broken down into units [shots] that were then combined into a sequence through continuity editing and, at the other end, there was the documentary, which – as he described it – depended on capturing the unpredictable event, dynamic and still developing.[6] In fact, experimental film became divided between the carefully planned and controlled forms of 'structural film' and the unplanned and uncontrolled forms of films, which were, in effect, home movies, a sub-genre of the documentary in which the object being documented might be the effect of light as refracted through a translucent ashtray on the Governor of Colorado's desk.

I entered these debates in the 1970s, shortly before I first began to make films myself in partnership with Laura Mulvey. The articles I wrote then were designed to justify the feature film format as a viable way of making an experimental film with a political argument. In fact, we made two feature-length films, the first – Penthesilea – made in Evanston, Illinois in 1974, and the second – Riddles of the Sphinx – made in London in 1977. Both Penthesilea and Riddles of the Sphinx were structured in segments without any continuity editing. The segments were rather like long chapters and were designed both to tell a story, schematically at least, and also to raise a number of political issues, particularly feminist issues. Had they been conventional films they would probably have fallen into the category of melodrama – a grandiose film like Penthesilea, for instance, was an unfinished project of Leni Riefenstahl's and Mulvey has observed that, made in another way, Riddles of the Sphinx could have been something like a Douglas Sirk melodrama, even a 'tear-jerker' or 'weepie.'[7]

The differences are budgetary, of course, but also stylistic – differences between one form of storytelling, well-polished and almost second nature, and another, consciously contrived and artificial. Penthesilea and Riddles of the Sphinx were essentially experimental, part of a series of similar films from the 1970s – Akerman's Je Tu Il Elle (1974) or Jeanne Dielman, 23 Quai de Commerce, 1080 Bruxelles (1975). Other significant films were Rainer's Lives of Performers (1972) and Film About a Woman Who... (1974), as well as the Berwick Street Collective's Nightcleaners (1975) and Jackie Raynal's Deux Fois (1976). These were the key films in what we might now think of as the avant-garde feminist breakthrough. Soon afterwards came Rainer's Jour-

neys from Berlin/1971 (1979), a meditation on anarchism set both in America and Germany yet shot mainly in London. In this film, as in many of Rainer's films, friends of the director play crucial roles – for example, Annette Michelson plays the part of an analysand whose male analyst (or therapist) refers to her on-screen as 'Annette.' At other times, the analyst is replaced by a female therapist and eventually by Chad Wollen, then nine years old, who merely barks at his patient! The relationship of patient to therapist, I might add, is likened to that of spoken fantasy to filmic illusion.

It was during this same period that Mulvey's 'Fears, Fantasies and the Male Unconscious' (1973) was published, followed by 'Visual Pleasure and Narrative Cinema' (1975) – now a classic – and 'Film, Feminism and the Avant-Garde' (1978), as well as my own 'Godard and Counter-Cinema: *Vent d'Est*' (1972), 'The Two Avant-Gardes' (1975) and '"Ontology" and "Materialism" in Film' (1976). Six years later I wrote another polemical text, 'Semiotic Counter-Strategies: Retrospect' (1982), which concluded as follows:

> I want to return again to my early invocation of the names of Brecht and Breton, two emblematic figures in the history of the avant-garde. Brecht and Breton suggest two very different avenues for art, but I think that each insisted on things that are necessary – Brecht on understanding and explanation, Breton on freedom and the power of the unconscious. Each also had a vivid interest in popular art and entertainment and incorporated elements from it into their own work. It is also true to say that they both gave equal weight to form and content, to aesthetics and politics. Here is a quote from Breton, to the Paris Congress of Writers in 1935: 'In art we rise up against any regressive conception that tends to oppose content to form, in order to sacrifice the latter to the former.' And a quote from Brecht: 'Even an ivory tower is a better place to sit in nowadays than a Hollywood villa.'[8]

To put these texts in their proper perspective it is important to recapitulate the filmmaking context in which they were written. At the beginning of the 1970s a series of significant films were made, largely within the structural or structural/materialist tradition. In 1970 came Hollis Frampton's Zorns Lemma, Ernie Gehr's Institutional Quality, George Landow's Remedial Reading Comprehension, Ernie Gehr's Serene Velocity and, in England, Malcolm LeGrice's Berlin Horse. The next year there was a group of much longer, very different films, including Brakhage's documentary of an autopsy, The Act Of Seeing With One's Own Eyes, Michael Snow's extended post-structural film, La Région Centrale, and Frampton's Hapax Legomena, which came out in segments through 1971 and 1972. 1973 brought Peter Gidal's structural-materialist classic, Room Film, and Anthony McCall's installation film, Line Describing A Cone. 1974 brought Michael Snow's very long work, 'Rameau's Nephew' by Diderot.

This return to the past is typical of many experimental filmmakers of the '60s and '70s. Malcolm LeGrice's After Lumière remakes Lumière's own L'Arroseur Arrosé. Warhol's Kiss recapitulates, whether consciously or unconsciously, Edison's May Irwin Kiss of 1896. In 1969 Ken Jacobs made his Tom, Tom, The Piper's Son, a re-filming off the screen of Billy Bitzer's 1905 film of the nursery rhyme, refilming as the camera wanders around the on-screen image, zooming in to details, making a film of a film, which Jacobs describes as 'a dream within a dream.' Looking back on it, I think that it is also true of Penthesilea, which not only incorporates documentary footage of a suffragette pageant but is also constructed by simply splicing together entire rolls of film, as if transported back to the period of so-called 'primitive cinema' before the invention of continuity editing. Experimental film, it seems, is constantly revisiting its past, both the distant past of Muybridge and Lumière and the more recent past. Filmmakers today draw on the work of their predecessors, the filmmakers of yesterday.

In her striking essay 'Wearing the Critic's Hat,' Lauren Rabinovitz begins by citing Brecht, asking herself whether the New American Cinema had indeed heeded Brecht's 'call-to-arms,' his insistence that artistic and political practices should be interlinked, or whether, under the rival influence of Jonas Mekas, whom she characterizes, unfairly I think, as a devotee of 'formalist aestheticism,' it had 'long since assumed a conservative function.'[9] In this context, Rabinovitz notes that, although there was a growing divide between the 'formalist' and 'radical political' camps, Annette Michelson had 'always understood the political significance of a discursively formalist cinema,'[10] as demonstrated by her essays in *Artforum*. Put another way, Michelson was responsive both to Brakhage and to Brecht, and perhaps Breton, as an underlying influence could be seen as bridging the gap between the two. The 'radical aspiration'[11] of which Michelson wrote so eloquently was radical in both its aesthetic and its political commitment. Certainly it was this same 'radical aspiration,' or an English version of it, that provided the foundation of both Penthesilea and Riddles of the Sphinx.

Seeing these films again recently, I was struck by their eclecticism, the way in which they juxtaposed very disparate elements. Penthesilea, for instance, includes a large segment of a silent feminist film from the suffragette years, together with a performance of the doomed battle of the Amazon warrior queen as enacted by a mime troupe and a single twenty-minute take of myself ambling around a conservatory telling the story of German playwright Heinrich Kleist's fascination with the Penthesilea legend and his tragic suicide. As I tell the story, I pick up a series of prompt cards that have been hidden on my path, and the camera zooms in on them as if to read the text that I have just spoken. The film ends with a reprise of all the previous scenes on a bank of video

screens and a final sequence shows the actress who plays Penthesilea cleaning the make-up off her face before exiting. Soon after it was finished, Mulvey noted, 'there are two levels of politics in the film – one, the presupposition that aesthetic issues are political, and two, the politics of the women's movement, in the more conventional sense of politics.'[12] In response, I observed that 'one of the things we wanted to do was to make a bridge between two types of film-making – experimental or avant-garde film and political film, in the agitational or militant sense.'[13]

Riddles of the Sphinx was much more systematic in its organization. It consists of seven sections, arranged in a symmetrical pattern, 'abcdcba,' with the central section consisting of thirteen 'chapters,' each in the form of a 360-degree pan – the shortest about two minutes in duration and the longest about ten. I saw the film again recently when it was being screened in Vancouver, and I was struck by the way in which the pans perform two separate functions, formal and discursive. Each pan has its own tempo as it moves inexorably onward without any perceptible change of speed, while new elements are constantly being revealed and their predecessors lost, rather like the continuous unrolling and re-rolling of a scroll. Within the circular space created by the rotation of the camera, objects, characters, and events pass by without pause or interruption. The space is both flattened, pressing inwards, in interiors, and expanded, pushing outwards, in exteriors. The characters seem to be moving against the background of a frieze, only circular like a nineteenth century panorama.

These effects were by-products of the choice and choreography of the film's camera movements, which, as in Zorn's Lemma, combined serial units into a puzzle to be solved. At the same time, each pan acts discursively as a link between narrative events. This sounds like a very formalist description, but formalism was indeed crucial to the way the film was originally planned and envisaged. Riddles of the Sphinx is designed to separate form from content, so that the spectator is simultaneously aware of each. Indeed, perhaps the most important riddle proposed by the film is that of how to reconcile form and content and, if they cannot be reconciled, how to interpret that failure of reconciliation, one which, by all the evidence, must have been intended. In the case of Riddles of the Sphinx, form and content deliberately remain independent, unreconciled. Neither is dispensable, but neither of them is dominant, either. Form and content are simply on different tracks. At the time, we thought of this strategy as a kind of Brechtian device, a way of creating what Brecht called 'distantiation,' forcing the viewer to step out of the story, out of any kind of identification, and to look at events as if from a distance, seeing them as issues to be dealt with intellectually, thought through or argued out.

This Brechtian model was certainly in our mind, but I don't think it was exactly what we wanted to achieve. A closer model was that provided by Victor Shklovsky, the Russian literary theorist, who developed his own theory of estrangement – what is often translated as 'laying bare [or defamiliarizing] the device.' The 'device' in this context refers to the particular stylistic and formal means, which a writer uses in order to tell a story. In traditional storytelling the style and the technique are simply means to an end, to the author's success in captivating the reader and carrying her (or him) through to the end, to the conclusion or 'pay-off,' without any disturbance or interruption. Shklovsky argued that when the stylistic or technical device was laid bare, it changed the reader's (or viewer's) whole relationship with the work, which came to be seen as something artificial rather than something natural. In Shklovsky's phraseology, the device can be seen as unmotivated, unrelated to the storyline, formally independent, like a 360-degree pan that doesn't follow the character or cut from one point of interest and involvement to another, so that 'we cannot provide a satisfactory realistic reason for its presence.'[14]

This is because, as commentators on Shklovsky have put it, the device (the series of 360-degree pans) exists simply to be noticed by the reader (or viewer). If we are made more aware of the technique than of its narrative function, it is 'revealed' or 'laid bare,' seen as artificial, rather than natural. Both Penthesilea and Riddles of the Sphinx are based upon the de-naturalization of technique. If technique is not revealed or foregrounded, the 'artistic devices' used tend to be 'automatized,' taken for granted, so that the viewer remains unaware of the camera work or the editing strategies as such. Shklovsky was interested in literary forms, such as the fable, which constantly remind us that we are reading a fiction that we cannot mistake for reality. This is somewhat different from Brecht's intention, which was to make us look at the characters and their actions objectively rather than identifying with them subjectively. Shklovsky's idea was that we should be as aware of aesthetic and technical qualities as we are of the story or the drama of the characters. We are deliberately made aware that the film has been constructed. In this sense, films like Penthesilea and Riddles of the Sphinx were intended to function somewhat like poetic fictions, albeit fictions that pose questions.

There were two significant cinematic sources for these films. First, the segmentation and the chapter structure owed a debt to Akerman's Je Tu Il Elle, which basically tells four separate stories, involving one central character, which the viewer is invited to compare with each other. Secondly, it also owes a debt to Godard's Vivre sa Vie (1962), another film which has a chapter structure, explicitly numbered, so that instead of getting a continuous story we are given a series of disjunct tableaux. Again we are being asked to make our own connections, to provide our own interpretation, once it has been made clear

that this narrative work is not going to be done for us, implicitly or explicitly, by the film-maker – in this case Godard, who consistently preferred questions to answers. Rainer, too, credits Godard as a source for an element of one of her films,[15] although she gives Martha Graham and Virginia Woolf equal credit. Her observation that 'Annette Michelson's non-naturalistic performance [in Journeys from Berlin] is totally appropriate'[16] suggests a hint of Brechtianism, although she also describes the text of the film as 'obviously a surreal kind of recitation,'[17] thereby introducing Breton, too.

My 1972 essay on Godard and counter-cinema welcomed his break with the conventions of mainstream cinema, particularly his rejection of conventional narrative structures. For instance, he repeatedly questioned the process of filmmaking within the film itself, introducing digressions and interpolations which fractured the customary coherence of the narrative, separating the content of the soundtrack from the content of the imagetrack and foregrounding the process of filmmaking within the film itself, often through the device of showing a film within the film, making the mechanics of filmmaking visible within the film itself, separating voices from characters, or using Brechtian estrangement effects. These devices made new demands on the spectator, who was compelled to puzzle out the meaning of the film rather than receiving it unreflectively. In a variety of ways, the spectator was encouraged to think about the film while watching it, to make a conscious effort of interpretation. Godard used many of the devices used by avant-garde or 'underground' filmmakers, but his purpose was quite different. When he showed scratched film in Vent d'Est, it was intended as a sign of negation, of crossing out, whereas in other films 'noise' or scratching was foregrounded as an aesthetic gesture.

In Journeys from Berlin, as in Riddles of the Sphinx, we are reminded that we are viewing a fictional world and must not mistake it directly for reality, but try to understand how it relates to reality. At the same time, the aesthetic dimension of the work is foregrounded, rather than it's narrative function. The narrative, as in a fable, is simply there to provide a set of examples, situations, which the viewer is being asked to interpret, while simultaneously enjoying the formal and aesthetic qualities of the work. In this sense, the idea of counter-cinema is directed, not so much against Hollywood films, which in fact often do 'lay bare the device' – for example, Hitchcock's Rope (1948) or a Busby Berkeley musical – as against André Bazin's call for 'realism' in the cinema, for the construction of an alternative world as real as that we are living in! The question Bazin asked himself was: 'What is cinema?' The truth is that the infrastructure of filmmaking – lighting, camera work, editing and so on – exists in the real world, unlike the characters or the story. One of the main aims of counter-cinema was to challenge the assumption of on-screen realism by drawing attention to these off-screen mechanics, materials and processes of

film, just as Brecht, working in the theatre, had drawn attention to the reality of the actor's stance or gestures.

In fact, a fascination with the mechanics of film, with its material structures and formal devices, goes back to the early years of film. Vertov's Man with a Movie Camera, a film particularly praised by Michelson, was made in the late 1920s, but it is already a film in which the camera is star and in which we see the processes of photography and editing as well as the projection of the film itself: a film within a film. The camera is also animated so that it can walk on its three tripod legs like a self-willed robotic creature. Man with a Movie Camera has often been hailed as a direct precursor of the self-referentiality and foregrounding of technology that became a major feature of avant-garde filmmaking in films such as Snow's Wavelength (1967), another film championed by Michelson, which notoriously is constructed of a single fourty-five-minute zoom from one end of a New York loft to another. While there are some narrative incidents during the zoom – even a death – the zoom continues inexorably, so that soon the body left lying on the floor is no longer visible. Interviewed slightly more than twenty years later, Snow was quite explicit about his wish to lay bare the device. In his own words, 'I knew I wanted to expand something – a zoom – that normally happens fast, and to allow myself or the spectator to be sort of inside it for a long period. You'd get to know this device which normally just gets you from one space to another. I started to think about the so-called film vocabulary before I made Wavelength – with Eye and Ear Control. You know, what are all these devices and how can you get to see them, instead of just using them? So that was part of it.'[18] Shklovsky would have been delighted. He actually worked in a film studio, which he describes in *The Third Factory*, where he writes about the 'cuttings' (the individual shots, the minimal units of film) that 'are kept in the canvas-covered bins in the cutting room.'[19] He muses, 'I would like to film in a different way – to achieve a different rhythm. I love long strips of life. Give the actors a chance to show their stuff. Less tea, less cutting. All we can do is try.'[20]

Another significant film of this period was Anthony MacCall's Line Describing A Cone, made in New York in 1973 and recently revived at the Whitney Museum of American Art.[21] In many ways, it is a very simple film. There is a projector and a screen. On the celluloid there is a single point of light which is extended over twenty minutes, frame by frame, to become the circumference of a complete circle. As a result, the beam of light running from projector to screen becomes the surface of a cone which seems strangely solid and palpable, a kind of time sculpture, or as MacCall has called it, a kind of kinetic light sculpture, until you try to touch it and your fingers pass clean through. To improve the effect MacCall used to recommend the audience to smoke, but now that is no longer feasible. When I projected the film in a class, we used chalk-

dust. At the Whitney, they created mist. Once again, the viewers' attention is drawn to process, rather than to image, inviting them to think about the nature of the projected image. In this piece, the projection beam itself is foregrounded rather than the image it projects, its reality demonstrated. The beam of light, apparently the most insubstantial of objects, becomes visible as if it were a solid figure.

In the summer of that year, August 1976, MacCall attended the Edinburgh International Forum of Avant-Garde Film, which brought together filmmakers from many different countries and with different aesthetic (and political) positions, such as the New York avant-garde and the post-Godardian counter-cinema. As a result of the provocative Edinburgh debates, MacCall began to rethink his position as a filmmaker. In 1978, with Andrew Tyndall, a friend who was a journalist, MacCall made Argument, a theoretically-oriented essay film, which was closer to the new wave of avant-garde political films being made in America and Europe than to structural film. In 1980 MacCall developed this type of filmmaking further when he and Tyndall joined Claire Pajaczkowska and Jane Weinstock in making Sigmund Freud's Dora, a filmic dramatization of and commentary on Freud's text from a feminist point of view. Dora, like Riddles of The Sphinx, derived from the convergence of feminism, Brechtianism, *Screen* theory, 'new narrative,' and the Godardian essay film. It was also photographed by Babette Mangolte, who had previously worked both with Rainer (whom she had met through Michelson) and then with Akerman on Jeanne Dielman (1975).

A principal source for Riddles of the Sphinx was Zorn's Lemma, a tripartite film, whose title refers explicitly to mathematical set theory. It begins with a recitation of the eighteenth century Bay State Primer's antique twenty-four-letter alphabet, followed by a series of twenty-four images, each repeated cyclically. Every image stands in for a letter of the alphabet and is on screen for just one second at a time – that is to say, technically, for twenty-four frames of film, matching the twenty-four letters of the alphabet. Each time the images are recycled – images of breakers at sea or of eggs cooking or painting a wall – one of them is dropped, until eventually none are left. Then, in the third sequence, human figures with a dog are seen crossing a snow-covered field, a sequence ending as the white of the snow merges with the white of the end leader, the film's own closing frames. According to Frampton, 'The film had its beginnings in pre-occupation with tension between graphic & plastic / flat vs. illusionistic elements in same space. The basic structure is one of a series of sets of sets, in tribute to Zorn.'[22]

In Zorn's Lemma, not only is time foregrounded but so is the mathematical structure of the film. The central part is also animated, and its grid-like structure of series of photographed words, from street signs and the like, together

with ongoing actions like waves breaking or painters painting, remind us of Frampton's fascination with Muybridge's work with the zoopraxinoscope at the end of the nineteenth century – a grid-like series of time-lapse photographic images revealing the structure of human and animal motion, phase by phase. Frampton recreated the grid-like structure of the same photographic device and also photographed a whole series of words displayed on signage, ready-mades found on the streets of New York, organized in alphabetical order. He was also close to a group of Minimalist and Conceptual artists – Frank Stella, Carl André, Robert Huot, and others – whose preoccupations he somehow combined with his own interest in Muybridge and mathematical set theory. Frampton had also been influenced by the example of Marcel Duchamp, with his own pseudo-systems, his interest in images in motion (Anemic Cinema), his penchant for word-play, and his invention of the ready-made. Thus Dadaism was correlated with structuralism and conceptualism.

In her foreword to a collection of Frampton's writings on or around the subjects of film, photography and video, Michelson noted Frampton's fascination with set theory as a means of reconciling a phenomenology of history with an epistemology.[23] Seen from a slightly different angle, this might be rephrased as a reconciliation of the diachronic with the synchronic, presenting photographic images in diachronic series, in order to make a film, while at the same time requiring us to see each image as part of a synchronic set. Put a third way, we might consider this reconciliation as another way of reconciling perceptual with conceptual art. Photography is generally considered to be temporal only in the sense of instantaneity, of a 'now-ness' which, Michelson points out, citing Dedekind's axiom, divides time into two separate classes – past and future, the divided realms of the having happened and the not yet happened.[24] A similar observation might even be made in relation to Eisenstein's montage sequences which, as Michelson has also pointed out, work not only through metonymy and contiguity but also through metaphor and comparability.

Films like Zorn's Lemma or Riddles of the Sphinx, as well as many others, both take us back to the origins and pre-history of cinema itself, to Muybridge for example, and draw upon a like-minded circle of contemporaries. Already in the 1920s, a kind of mutual aid had developed between film-makers. Léger introduced Buñuel to Man Ray, who introduced Léger to Louis Aragon, still then a Surrealist. They all attended the screening of Un Chien D'Andalou, as did Cocteau, who put Buñuel in touch with the Vicomte de Noailles, who agreed to finance L'Age D'Or, in the same way that he had previously financed Man Ray's film, Le Mystère du Chateau de Dé. Max Ernst and Pierre Prévert appeared in the film, in the scene with the bandits in Catalunya. In making Un Chien D'Andalou, Bunuel had already worked for Jean Epstein on Fall of the House of Usher (1928), and he also looked back to an earlier French avant-

garde – the films he mentions specifically are Cavalcanti's Rien Que Les Heures and René Clair's Entr'Acte. Avant-garde filmmakers saw themselves as members of a community, with a common project.

A similar atmosphere prevailed in the 1960s in New York or in the 1970s in London. Riddles of the Sphinx was partly shot in Malcolm LeGrice's house – the kitchen scene – and partly in Steve Dwoskin's – the mirror scene. The editing room scene cites Mary Kelly's Post-Partum Document. The central character's young daughter – in the high chair, at day-care, in the grandmother's garden – was actually the camerawoman's daughter. The whole history of the avant-garde is one not just of artistic or aesthetic connections but of social connections, too. In fact, these social connections are what make a movement possible – whether the Surrealist film movement or underground film or structural film or counter-cinema. Thus in the late 1920s, when the idea of an alternative cinema really took root in America, those involved were the closely knit group who supported the 'Little Cinema' movement, an attempt by exhibitors to create a space for 'experimental pictures' or – a slightly different category – 'art pictures,'[25] such as Watson and Webber's Fall of the House of Usher, which premiered at the New York Film Art Guild in 1928. At the same time, in France, Germaine Dulac's films were screened through the emergent 'ciné-club' movement, and in England, in the 1920s, there was the London Film Society.

Half a century later, Anthology Film Archives and Millennium Films in New York and The Other Cinema in London fulfilled much the same role, screening avant-garde features, including the premiere of Riddles of the Sphinx. It was in the 1970s that structural and structural/materialist film gradually extended in length and began to give way to the experimental and avant-garde feature film, as exemplified by Rainer, by Mulvey-Wollen, and by Akerman, as well as Joyce Wieland, Jean-Marie Straub and Daniele Huillet (History Lessons, 1972), and the Berwick Street Collective's Nightcleaners. It was in this context that I first wrote about the bifurcation of experimental film between the tradition of the Film-Makers' Co-op, on the one hand, and the avant-garde feature film, often with a political subtext, on the other. At the beginning of the decade, I was preoccupied with the implications of Godard's withdrawal from the usual goals and structures of the film industry, first on his own account and then in collaboration, notably with J-P. Gorin and Anne-Marie Miéville.

In 1974, when asked which filmmakers most interested me, I replied, 'Straub, Godard, Joyce Wieland, Michael Snow, Hollis Frampton for Zorns Lemma, Jackie Raynal for Deux Fois.' Then I added, 'I'm more interested in Hitchcock than before.'[26] In 1925 Hitchcock began to attend film screenings organized by the London Film Society at the New Gallery Cinema. There he de-

veloped connections and interests, which stayed with him throughout his career, including an interest in experimental film. Many years later, he was inspired to make Rope; a film which shamelessly laid bare the device through a miraculous series of long takes running over many minutes. Yet the experimental dimension of Rope that moved Hitchcock the most was the machine, which controlled the lighting of the giant cyclorama of New York that can be seen through the apartment window. The technician at the console could control the light to suggest the changing time of day. As night fell, the effect of sunlight was gradually diminished and replaced by electric lights as if from windows and neon signs. As Hitchcock recalled, 'By the time the picture went from the setting of the sun in the first reel to the hour of total darkness in the final *dénouement*, the man at the light organ had played a nocturnal Manhattan symphony in light.'[27]

Paradoxically, Hitchcock, so successful in the industry, was also a director fascinated by the idea of experimental film. He worked with Salvador Dali and Saul Bass and planned to work with Len Lye. It is only appropriate that Douglas Gordon should have made 24 Hour Psycho, defamiliarizing Hitchcock's most canonical film. The history of the avant-garde is that of repeated attempts to undermine the scopic regime of Hollywood and set up an alternative – or rather a set of different alternatives – but, at the same time, it is pulled towards the feature film, towards narrative. This does not mean abandoning the idea of film as visual art. On the contrary, it means setting the different aspects of cinema together in new and unexpected ways, defamiliarizing and making strange. It means foregrounding both new possibilities for sound, editing, or image and new possibilities for narrative and dramatic performance. It must always veer away from the beaten path into the shifting sands of the unclassified and unsettled, embracing the polymorphously perverse, hovering between narration and abstraction, concept and drama.

I would like to conclude with a final reflection on the work of Viktor Shklovsky. Shklovsky was a literary critic, despite the time he spent working in a film studio, who argued that a literary work always consisted of the sum of its devices. Most authors attempted to conceal the devices, so that the reader was carried through the book without any friction, but Shklovsky championed, as I have noted, those books in which the device was foregrounded, laid bare. Shklovsky was not explicit about the political dimension of the 'estrangement' caused by laying bare the device – it was left to Brecht to stress that aspect – but he did insist on its theoretical and critical importance. In 1919, he explained that he 'sought a reinterpretation of literature that would stress the importance of purely linguistic elements and artistic devices: sounds and words, structure and style.'[28] He also stressed the role of the framing device – the significance of the Arabian Nights, for example, in which the individual

stories are framed within the story of Scheherezade, and the 'threading device,'[29] through which a series of separate stories or incidents are linked together through a common protagonist, as occurs in Riddles of the Sphinx. In Zorn's Lemma, however, the common protagonist is replaced by the alphabet, a conceptual protagonist, so to speak, whose product is the list or set rather than the tale.

In the world of experimental film and counter-cinema, the language consists of its own, purely filmic elements and artistic devices – devices such as the zoom, the pan, the projection beam, and so on, as well as more abstract and conceptual devices such as the significance of counting twenty-four frames per second in relation to the twenty-four letters of the Bay Street Primer alphabet. However, as Johanna Drucker points out in her fascinating book *The Visible World*,[30] Shklovsky's writings did indeed have a considerable effect, not only on literature but also on visual art, particularly through their impact on typography, especially in the case of avant-garde poetry in which the visual effect of the alphabet and its disposition on the page was as important as its verbal form and content. I am sure that Shklovsky would have appreciated the artistic significance of such technological devices as the pan, the zoom, the ten-minute take, and the beam of light, artifacts that, rather than seamlessly hidden, were shamelessly foregrounded by a new generation of filmmakers. I am sure he would have approved of the insistent visibility of the filmic device, the shot as such, as much as he did the visibility of the material and the mechanical devices of typography.

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Hitchcock and Narrative Suspense

Theory and Practice

Richard Allen

Suspense is a paradigmatic instance of the manner in which a spectator's emotional responses to narrative can be manipulated, and Hitchcock's skill as a film director has long been identified with his mastery of suspense. Narrative suspense develops out of a basic and pervasive feature of storytelling – the manner in which stories sustain our interest by encouraging us to anticipate what happens next. However, narrative suspense is more than simply a question of anticipating what happens next; it involves the generation of a state of anxious uncertainty about what happens next. How is this anxious uncertainty engendered? Noël Carroll argues that this state of anxious uncertainty is created in a narrative where the question 'what happens next?' is dramatized through the representation of two alternate narrative outcomes of a specific kind. One is a moral outcome and hence, conventionally speaking, desirable, yet it is unlikely. The other is an immoral outcome that is conventionally undesirable, yet it is likely to happen.[1] For example, in D.W. Griffith's The Lonely Villa (1909), villains pin down the heroine in her isolated house. Will the absent hero rescue her before they overpower her? It seems unlikely. On the one hand, the villains are nearby and she seems defenseless; on the other, the hero is a long way off and does not know what is going on. How is the hero going to get back in time to rescue the heroine? Carroll puts forward his theory of suspense in explicit contrast to the theory offered by Roland Barthes and, in a slightly different form, by François Truffaut in his interview with Hitchcock. Both Barthes and Truffaut argue that suspense is essentially generated through the fact that we do not know the nature of the narrative outcome whose resolution is deferred or delayed, and it is this 'suspension' of the narrative outcome that causes suspense. In this paper, I shall argue through an investigation of Hitchcock's theory and practice of suspense that Carroll's theory of suspense requires a two-fold qualification. Hitchcock's practice not only calls into question the moral underpinnings of Carroll's definition of suspense, as Carroll himself recognizes, but also Hitchcock's theory and practice of suspense require us to reconsider the theory of suspense as narrative deferral or delay that is rejected by him. Furthermore, by investigating Hitchcock's prac-

tice in the light of the theory of suspense, I hope to derive a clearer understanding of the nature of Hitchcock's achievement as the 'master of suspense.'

The Moral Structure of Suspense

It is a critical commonplace about Hitchcock's work that he works almost wholly within the genre of the thriller, a narrative idiom that usually involves, amongst other things, the articulation of clear-cut moral co-ordinates that discriminate the good guys from the bad through the commission of a criminal action that usually involves murder. Suspense in Hitchcock's works is broadly structured around these moral co-ordinates and the allegiance they give rise to in the spectator. In The 39 Steps (1935) Hannay is framed for a killing he did not commit. Will he be wrongfully arrested or escape? In Notorious (1946) Alicia Huberman is sent on a dangerous mission to penetrate a murderous German spy ring that is working on a nuclear bomb in Rio. Will the spy she marries in order to further the allied cause – Alex Sebastian (Claude Rains) – find out that she is trying to expose him, and what will he do? In Strangers on a Train (1951) Guy Haines (Farley Granger) is caught up in a diabolical plot in which the villain, Bruno Anthony (Robert Walker), kills his wife and threatens to frame him for the murder unless Guy kills Bruno's father. Will Guy fall victim to Bruno's web of blackmail or will he escape his snare?

Furthermore, in Hitchcock's work, the suspense generated around the plot involving the conflict between the hero (or heroine) and the villain or villains is linked to the suspense generated by the romance plot. Hitchcock himself insisted that suspense is as much a feature of the romance as it is of the pure thriller, although, as Knight and McKnight point out, the emotional emphasis of romantic suspense is different.[2] In a thriller our concern lies with the threat posed by the agents of evil and fear for the hero's safety, whereas the emotional emphasis of romantic comedy lies in our wish for a happy outcome and the way in which that wish is frustrated by obstacles placed in the way of the romance. By combining the elements of the thriller and the romance in his 'wrong-man' and, sometimes, 'wrong-woman' narratives of the 1930s and after, Hitchcock augments the parameters of suspense, as they are outlined by Carroll, and intensifies our emotional investment in the narrative outcome. For the romance narrative adds to the anticipation of a fearful outcome that is characteristic of the thriller or the horror film an intensification of the wish for a happy ending that characterizes the romance narrative. The obstacles placed in the way of the hero in a 'wrong man' narrative such as The 39 Steps – he is wanted for murder – are precisely the obstacles that need to be overcome for

the romance to be cemented. For example, in Strangers on a Train, the 'wrong man' Guy must clear his name in the murder of his wife in order for his romance with Ann Morton (Ruth Roman) to flourish. Notorious is a 'wrong woman' narrative that focuses upon the notoriety and hence apparent untrustworthiness of the woman who is required to prove herself to the man. By risking her life as a double agent, Alicia atones for her past in order to win the love of Devlin (Cary Grant).

However, while Hitchcock's works invoke clear-cut moral co-ordinates, those co-ordinates are also systematically undercut in a number of ways. The 'obstacles' that delay the realization of the romance often, paradoxically, involve something that is desired by the hero or heroine or their would-be partner. In a wrong man narrative such as The 39 Steps or To Catch a Thief (1955), the hero is rendered desirable to the heroine on account of the fact that he occupies a position outside the law. In Strangers on a Train, the murder of his wife is something that Guy explicitly wishes for since she refuses him a divorce and hence blocks his path to marriage. In Notorious, clearly part of what attracts Devlin to Alica Huberman is her 'notoriety' even though it is a source of resentment to him. Even where the 'wrong man' character threatens the innocent heroine, she admires him, as in The Lodger (1926), Suspicion (1941), or Shadow of a Doubt (1943). More generally, where a character is perceived as a source of threat they are also rendered alluring or desirable because they are endowed with the sympathetic traits of the dandy: flamboyance, grace, charm, intelligence, wit, and gregariousness – traits that often contrast positively with the dull, flat characters of Hitchcock's nominal heroes who are often policemen. Compare the Lodger (Ivor Novello) with Joe (Malcolm Keen) in The Lodger, or Uncle Charlie (Joseph Cotton) with Jack Graham (MacDonald Cary) in Shadow of a Doubt, or Bruno Anthony with Guy Haines in Strangers on a Train.

The moral inversion that renders villainy alluring in Hitchcock is further sustained through systematic strategies of visual and narrative parallelism and doubling between hero and villain that undercuts the ostensible moral opposition between hero and villain in a manner that may upset our allegiance to the romance itself as a desirable narrative outcome. What is wished for may be feared, and what is feared may be desired. In Notorious the anti-hero, Alex (Claude Rains) has many desirable qualities that the nominal hero, Devlin, lacks. He is attentive, generous, and kind to Alicia, until he finally realizes that she is a double agent and intends to kill her, and he has an endearingly vulnerable, feminine quality that is registered in his tremulous facial muscles. The 'perverse' marriage he makes with Alicia is in some ways more wholesome than the romance. Furthermore, his colleague, Dr Anderson (Reinhold Schunzel), portrays qualities of concern with her welfare conspicuously lack-

ing in the cold, affectless CIA operatives. At the conclusion of the film, alongside the structure of suspense that engages our wish for Alicia and Devlin to escape exists the knowledge this very wish will lead to the demise of Alex. This knowledge complicates the suspense situation so that the situation itself rather than the narrative outcome becomes the object of fascination. The reason we are prepared for Alex to be 'sacrificed' is that he is plotting with his Lady Macbeth-like mother to murder Alicia. Yet we also know that he finds himself in this situation in the first place only because he has been manipulated into marriage by another woman who is stronger than he is.

It is in the context of such pervasive narrative ambiguity that in 'local' suspense situations Hitchcock completely subverts the moral co-ordinates that Carroll argues characterizes suspense and we are encouraged to sympathize with the devil.[3] Consider the moment when Norman Bates (Anthony Perkins) in Psycho (1960) pauses in momentary trepidation when the car that contains the body of the dead Marion Crane (Janet Leigh) fails for a moment to sink into the swamp. We do not, of course, know yet that Norman is the killer – we believe it is his mother – and Norman has been rendered quite sympathetic on account of the way he cares for her. The fact that he cleans up after her mess is an extension of his helpless dependency, and we pity him. Nonetheless, Norman is here trying to cover up a crime, and Hitchcock invites us to wish for the car to sink, something that is at once morally undesirable and, momentarily at least, improbable. In Strangers on a Train, the anti-hero Bruno Anthony (Robert Walker), whom we know to have murdered the hero's wife, drops a lighter down a drain that he wants to use to implicate the hero in the crime, and Hitchcock's camera presents his desperate attempts to retrieve it in excruciating close-up, in such a way as to render a morally undesirable event one that is wished for by dramatizing its improbability. Again our alignment with Bruno is fostered by the fact that Bruno displays the sympathetic qualities of the dandy figure in contrast to the dull, wooden and rather self-serving hero, Guy Haines. In Frenzy (1972), the mass murderer, Robert Rusk (Barry Foster), tries desperately to retrieve a tiepin that will implicate him as a murderer from the clenched fist of the naked murder victim in the back of a potato truck in a manner that parallels the suspense situation in Strangers. In Frenzy, once again, Hitchcock goes to great length to negatively contrast the qualities of the nominal hero, Richard Blaney (Jon Finch) – he is egotistical, pusillanimous, and full of sour grapes – with the endearing qualities of the smooth, savvy, popular, and mother-loving villain. In each of these cases the audience is at least temporarily encouraged to root for the successful completion of an action whose success would contribute to an immoral outcome to the story by being placed in sympathy with the predicament of a morally undesirable character whose likelihood of success is presented as being improbable.

These examples are undoubtedly privileged moments of 'local suspense' within larger suspense structures that at least on their surface articulate more conventional values. But there is at least one film in which this moment of 'local suspense' occupies the entire film – Hitchcock's 'experimental narrative' Rope (1948). In Rope the suspense is created in large part by the fact that the audience is encouraged to wish for the murder to remain concealed to the 'audience' of guests in order not to spoil the party; Hitchcock encourages us to enjoy, alongside Brandon (John Dall) who orchestrates the party, the way in which discovery of the body is postponed and deferred. Part of the reason for the distinctiveness of Rope is that, like Psycho, it lacks the narrative armature of romance to sustain conventional moral values. Indeed, in a sense, it is the possibility of heterosexual romance that is killed off at the very beginning of the film by the murder of Kevin, the suitor of the film's nominal heroine Janet Walker (Joan Chandler), just as this possibility is killed off by the murder of Marion Crane in Psycho. Furthermore, like Strangers on a Train, Rope articulates a suppressed counter-narrative to that of the heterosexual romance; namely, the 'perverse romance' of the veiled homosexual couple that finds its expression in the enjoyment of crime and its concealment. Since their adversary in the film, Rupert Caddell (James Stewart) is a man who has tutored the heros in their pursuit of perversity, the restoration of conventional morality is tenuous at best. Furthermore, the fact that the narrative outcome turns out to be a moral one doesn't alter the fact that we are encouraged to wish for Brandon to succeed, against the odds, in his enterprise.

Carroll himself points out that one way of accommodating this kind of subversion of the moral co-ordinates that seem to characterize the orthodox suspense situation would be to simply modify the theory. Suspense is generated not between an outcome that is morally desirable yet unlikely and one that is morally undesirable yet likely, but simply between an outcome that is desired yet unlikely and one that is undesired yet likely.[4] However, while such a formulation could fully account for these examples of suspense in Hitchcock, it also fails to capture what is distinctive to them and by extension to Hitchcock as a whole; namely, the manner in which Hitchcockian suspense is bound up with the subversion of conventional moral co-ordinates, especially as they are enshrined in the romance narrative. Carroll seems to appreciate the significance of Hitchcock's example in this respect. Hitchcock's work gives the lie to any theory of suspense that weds the question of whether or not an outcome is desirable too closely to whether or not the outcome is moral. On the other hand, it also suggests the importance of moral evaluation to the cultivation of emotional response. For to the extent that Hitchcock's films subvert conventional moral options, they do so only by strenuously and self-consciously chal-

lenging the customary moral assumptions that are embedded in the conventional suspense structure anatomized by Carroll.

A Note on Suspense and Humor

The inversion of orthodox suspense in Hitchcock's films is supported by the way in which Hitchcock uses black humor to solicit our identification with the figure of the dandy or anti-hero. For example, in Rope, our knowledge of crime in contrast to the ignorance of the partygoers makes us complicit with wrongdoing, but as Thomas Bauso points out, our complicity is fostered by the fact that we are encouraged along with Brandon to take perverse pleasure in the situation: 'We may be appalled at Brandon's "warped sense of humor," but since we can't help getting the morbid jokes, we are compelled to laugh at them, and our laughter implicates us in the act of murder.'[5] As Susan Smith has argued, the killing of Stevie in Sabotage can be understood in part in relationship to the unacknowledged desire of Verloc, the saboteur, to get rid of his burdensome nephew. If Verloc functions partly as Hitchcock's authorial surrogate in the film, Verloc's actions here serve to express Hitchcock's own sadistic impulses towards his audience. But arguably, Hitchcock also invites the audience to sympathize with these impulses rather than to simply be victimized by them. That is, perhaps he invites us to derive a certain sadistic satisfaction from seeing the child blown to pieces rather in the manner that in Rope Hitchcock invites us to enjoy, along with Brandon, the irony of the dining over a corpse.[6] The potato truck scene in Frenzy begins with the killer, Rusk, wheeling out the dead body of his murder victim and lifting it like a sack of potatoes into the back of the truck. A series of jokes encourage our identification with Rusk. Hitchcock puns on the idea of the body 'weighing like a sack of potatoes,' which reflects the point of view of Rusk. Rusk's sense of relief is echoed in the number plate FUW on the truck and also by a melody that combines discordant strings with a playful trill on the piccolo accompanied by strangely disconcerting laughter.

But, while black comedy encourages us to wish for a narrative outcome that conflicts with conventional moral values, it also encourages the audience to step back from an engagement with the content of the fiction and to entertain an appreciation of its form. That is, Hitchcock uses humor to make the audience self-aware of his role as narrator in soliciting fearful anticipation and shock and of the willingness of the spectator to enjoy not simply 'negative' emotions but a reversal of their customary moral allegiances. Thus, while black humor encourages the audience to enjoy morally iniquitous deeds, it

also contributes to the diffusion of suspense. Smith, who explores this aspect of Hitchcock's work in great detail, points out that often a moment of incongruous laughter, like the moment cited in Frenzy, has this effect. For example, when Daisy laughs at the moment that the menacing lodger enters into the boarding house in Hitchcock's The Lodger, her laughter, while signaling her vulnerability, also functions to diffuse the suspense by commenting on its self-conscious melodramatic nature.[7] Speaking of the scene in Sabotage after the bomb explodes killing Stevie following a sequence of prolonged suspense, James Naremore writes: 'The sequence ends with a visual and sound dissolve that takes us from the exploded bus to Winnie Verloc's parlor, where the sound of the explosion melts into polite, rather strained laughter among her guests – a laughter that, in this context, resembles nothing so much as the sound of broken glass or shattered debris.'[8] In practice, the line between the use of black humor that contributes to suspense and the use of black humor that detaches us from suspense is a thin one. For in the sense that humor allows us to sympathize with the anti-hero, it does so by detaching us from the moral consequences of what we see, enabling us to find amusement in the absurdity of the situation. It is linked, as it were, to the aestheticization of the moral question, where murder is turned into a fine art or a joke, as it is in Hitchcock's Rope.

Two Types of Suspense

According to Carroll suspense involves not only the postulation of alternative, morally contrasting narrative outcomes, but also probability or relative likelihood. Carroll argues that it is this dramatization of probability – of the relative likelihood of a bad outcome versus the relative unlikelihood of a good outcome – that is central to the aesthetics of suspense. A formalized countdown system with a deadline set in place dramatizes the calculus of probability, because the closer we are to the moment of impending doom the more it becomes unavoidable and hence fearfully anticipated. A deadline is set, say, for a bomb to explode, and the time to the explosion is then registered by the ticking of a clock, the ticking of the bomb itself, and by the rhythms of musical accompaniment. Even the less fearful suspense situations characterized by romantic comedy rely on narrative deadlines. For example, in Howard Hawks's His Girl Friday (1940), the drama of the situation turns on the fact that Hildy (Rosalind Russell) and Bruce Baldwin (Ralph Bellamy) are to depart on the 4:00 p.m. train to Albany and marry that very day. This looming deadline renders improbable the fact that Hildy will stay to work on the paper and, hence, also remarry Walter Burns (Cary Grant). The aesthetic of suspense that arises out of narra-

tive deadlines entails an ever-increasing amount of information about what is happening on a moment-to-moment basis, which is articulated in cinematic terms through visual montage of the kind perfected by D.W. Griffith. Faster and faster alternation between the position of the victim under threat and the rescuer reflect the ever-diminishing time frame and the narrowing of the possibility of rescue to an ever-diminishing sliver of time.

This kind of classical suspense situation that builds up the pace of editing as the threat becomes more and more inevitable against a looming deadline is illustrated in the sequence that leads to the destruction of Stevie in Hitchcock's Sabotage. First Hitchcock establishes very clearly a deadline of 1:45 p.m. for the bomb to explode. When Stevie sets out on his journey he is beset by delays – he gets lost in the market-day crowds and is lured into being cleaned up by a street peddler. To remind us of the imminent catastrophe, Hitchcock periodically intercuts close-ups of the bomb under his arm and superimposes the instructions written by one of the saboteurs, 'Don't forget the Birds will Sing at 1:45.' But Stevie gets distracted again, this time by the Lord Mayor's show, and Hitchcock interposes a montage of a clock reading 1:00 p.m., the inner cogs engaging in a manner that suggests the relentless momentum of time, and a minute hand moves in fast-forward to 1:15. But Stevie continues to 'dilly-dally' at the show. He gets onto the bus and snuggles a dog held by the neighbor blissfully unaware; he looks around behind him at a clock outside and feels the package next to him. His fidgeting registers his worry that he is late, but also, ironically, evokes the much deeper anxiety of the audience. We pass a clock reading 1:30, then again, 1:35. Hitchcock cuts at an increasingly frequent place between shots of Stevie petting the dog and looking outside, shots of a clock getting near the time of the explosion, shots of the bomb, shots of the conductor at the back of the bus that has a diagonal bar across the window that evokes 'no entry' or a barricade, and shots of the bus caught up in serial delays: it is stopped by a policemen, then by a traffic jam, and then by traffic lights indicating 'STOP.' When the lights change to 'GO' Hitchcock cuts rapidly from Stevie to '1:45,' then to a close-up of the clock face moving to '1:46,' then to three shots in rapid succession of the bomb, and finally the explosion, as if detonated by the montage. The salience of the temporal deadline and the accelerating tempo of the sequence are underscored by an orchestration that features rhythmic sounds like the ticking of a clock, punctuates the shots of the clock face with ominous chords, and increases tempo with the accelerating montage. The entire sequence is a lesson in the aesthetics of classical suspense and illustrates Carroll's rationale for the way it operates.

But Carroll claims that the explanation of suspense in terms of a 'calculus' of probability not only explains paradigmatic instances of suspense such as this, but that it also argues conclusively against the alternative interpretation

of the aesthetics of suspense suggested by Truffaut and Barthes. In his conversation with Hitchcock, Truffaut claims that 'the very nature of suspense require[s] a constant play with the flux of time, either by compressing it, or, more often, by distending it.'[9] According to this theory, temporal retardation or delay engenders suspense. The theory of suspense as temporal retardation or 'suspension' requires comparing the event that is presented to the spectator the moment that a state of anxious uncertainty is generated with another event – the delayed one. But what is the delayed event? One candidate for the event against which the delay is measured is the event as it would have taken place in real time. However, awareness of the real time that events take is not usually invoked or called upon in suspense situations. It would seem to be an accidental side effect rather than a necessary feature of suspense. Furthermore, the distention of screen time in relationship to real events is not sufficient by itself to generate suspense. Eisenstein's Odessa Steps sequence from Battleship Potemkin (1925) equally involves prolonging the massacre on the steps in terms of screen time relative to actual time, but the sequence is not in the least suspenseful, in part because the audience already knows the outcome and in part because Eisenstein makes sure the audience knows the outcome by presenting the conclusion of the action – the Cossacks cutting down the fleeing citizens of Odessa – at the beginning of the sequence.

Barthes offers a more promising candidate for the delayed event in relationship to which suspense is to be measured – the narrative event that would resolve the suspense situation itself. For Barthes, suspense involves a temporal retardation or delay in narrative resolution. In terms of the question and answer structure of narrative posed by both Barthes and Carroll, suspense, according to Barthes, entails a delay in the answer of the question proposed by the narrative: 'Under the hermeneutic code we list the various (formal) terms by which an enigma can be distinguished, suggested, formulated, held in suspense, and finally disclosed.'[10] Of course, delay in the resolution of narrative is part and parcel of all narratives. Every story delays and defers its outcome and thereby engages our interest in what happens next. To define narrative suspense simply in terms of delay renders all narrative suspenseful and thereby robs the definition of suspense of any distinctive characteristics. This is one of Carroll's motivations for developing an account of suspense in terms of a competing answer to a question where temporal delay per se seems to play no role. But does this mean that the idea of temporal retardation or delay has no independent explanatory value in understanding the role of suspense and in Hitchcock's work in particular?

In his lecture to students at Columbia University Hitchcock contrasts what he calls the objective aspect of suspense exemplified in the parallel editing or cross-cutting that was perfected by Griffith and his own approach to suspense

that adds a 'subjective factor' by which he means 'letting the audience experience it through the mind or eyes of one of the characters.'[11] But Hitchcock wishes to get at something more, for he suggests that subjective suspense contrasts with objective suspense not simply through the presence of a character's point of view but also in presenting the spectator only one side of the suspense situation and hence 'making the audience suffer.'[12] In other words, Hitchcock is concerned to pinpoint the role of narrative suppression in generating suspense. This is an idea that Hitchcock is usually assumed to have rejected. When he makes his famous distinction between suspense and surprise, he defines the difference as whether or not the spectator is fully informed about what is going on in the scene. In the situation of suspense we are fully informed about something the characters are unaware of, for example, that there is a bomb about to explode under the table around which they are sitting. In the situation of surprise we are as ignorant as the characters are about the events that are about to happen. Furthermore, when Truffaut raises the idea to him that suspense may rise out of a hidden danger Hitchcock directly contradicts him: 'To my way of thinking mystery is seldom suspenseful. In a whodunit, for example, there is no suspense, but a sort of intellectual puzzle. The whodunit generates a kind of curiosity that is void of emotion, and emotion is an essential ingredient of suspense.'[13]

How is it then that mystery generated by suppressive narration can be suspenseful? Hitchcock is undoubtedly right about the whodunit lacking suspense, for what is involved here is less a sense of hidden danger that arouses emotional response than an intellectual puzzle about which one of multiple possible candidates for the murderer is the right one. However, the kind of mystery Hitchcock has in mind when he speaks of subjective suspense is not the intellectual puzzle of detective fiction but the situation that is created when a character – and the spectator who is aligned with the character – is placed in a state of uncertainty about the narrative outcome, and this uncertainty becomes a source of fear and anxiety. The mystery contains something incipiently threatening and we need to find out what it is. Something more is involved than mere curiosity about the answer to a question; rather, what is posed in the narrative is an enigma that the narrative situation demands us to resolve, for something is fundamentally at stake for the character in the fiction and hence for the spectator. Mystery is not inherently suspenseful, but it becomes suspenseful when uncertainty breeds anxiety that fuels the wish to resolve it. Furthermore, in Hitchcock's films, as we shall see, not only does a wish to resolve the mystery arise from the fact that it is incipiently threatening but the fact that the mysterious event is incipiently threatening may also be a source of allure. It is for these reasons that Hitchcock's description of this form of suspense as subjective suspense is a good one, for it pinpoints the difference between the

intellectual uncertainty of detective fiction and the anxiety-provoking uncertainty of the suspenseful mystery, where the lack of knowledge itself is in some way threatening to the character and thus a source of concern to the sympathetic spectator.

The use of suppressive narration that restricts us to the epistemic and often to the perceptual point of view of a character in a state of anxious uncertainty and that sustains suspense by restricting us to that point of view is ubiquitous in Hitchcock's work. For example, in Rebecca (1940) when the second Mrs. De Winter (Joan Fontaine) arrives at Manderley, she has been primed to think of Rebecca, her husband's first wife, as a figure of awe and fascination, about whom she both desires and fears to know more. By restricting us to the epistemic viewpoint of the character, Hitchcock suppresses our knowledge of who Rebecca really was and the nature of the 'threat' she poses until Maxim's (Laurence Olivier) confession scene late in the narrative. During the second Mrs. De Winter's first prolonged encounter with Rebecca's housekeeper, Mrs. Danvers (Judith Anderson), she experiences the overwhelming presence of Rebecca in the house of Manderley. Leaving her bedroom on Danvers' cue, she enters diminutively, like a girl in a fairy tale, a hall filled with towering, bulbous (feminine) forms projected as shadows onto the curved white plaster walls. And with Danvers following silently, as if her escort, Mrs. De Winter glides, with her back to Hitchcock's camera, through a long, cathedral-like corridor shimmering with watery light, echoed by mystical strains of tremulous violins. They hesitate at the top of the stairs, framed from behind in two shot as Danvers points out the doors of Mrs. de Winter's room. First Danvers, then Mrs. de Winter, peel off, leaving Hitchcock's camera to venture, to be lured, a little closer to the gigantic doors that look like the entry gates to some forbidding Masonic temple until, as it were, stopped from approaching any closer by Rebecca's dog Jasper who stands guard. The suspense that is invoked here is the fearful anticipation of something whose character is wished to be known and it is registered as a delay or forestalling of the moment of narrative disclosure. Vertigo (1958), in ways that parallel Rebecca, wroughts a massive deception upon Scottie (James Stewart) and the spectator alike. Hitchcock's signature use of a forward tracking point-of-view shot and backward tracking reaction shot in this film provides a very precise evocation of the manner in which mystery builds into suspense the force of a lure.

But if we are to recognize a form of suspense in which temporal delay has an intrinsic rather than extrinsic or incidental role in the generation of anxious uncertainty, what relationship does this form of suspense bear to the case of suspense in which suspense is generated through the relative probability of a bad outcome versus the improbability of a good outcome? In suspenseful mystery or impure suspense, the anxiety-provoking situation takes the form of

an enigma that we seek to resolve because it is incipiently threatening. We do not know the relative probability of a 'good' or 'bad' resolution to the enigma, or alternatively, we might say that in this situation a 'good' or 'bad' outcome is equally possible. Narrative delay postpones the resolution of the enigma and thereby prolongs the initial condition of narrative suppression. In this way anxious uncertainty, generated by the narrative enigma, is sustained and suspense created. In this kind of suspenseful situation our state of anxious uncertainty does not rise or fall but remains more or less constant until the narrative enigma is resolved. However, in the case of pure suspense, with the narrative possibilities resolved into a clearly defined good option and a clearly defined bad one, the spectator is no longer simply placed in a condition of anxious uncertainty about narrative outcome but is placed in a situation where their anxious uncertainty is itself subject to manipulation and control. The suspense situation becomes one in which suspense can be increased or decreased according to the 'calculus' of probability. Once the narrative options are posed in this way, the factor of delay per se drops out of significance, for delay plays its role as a suspense generator only when the nature of the narrative answer is an anxiety-provoking, because incipiently threatening, enigma. In pure suspense, since the nature of the threat is a known quantity, the delay in narrative resolution is keyed to delays that are dramatized in the story, delays that serve to increase the likelihood of a bad outcome as the suspense sequence from SABOTAGE exemplifies. Every time Stevie's progress is hindered the chances of his being blown up increase.

Carroll is right, I think, in identifying the contours of pure or objective suspense but he fails to recognize the distinctive character of impure or subjective suspense or suspenseful mystery. The distinctive character of this form of narrative suspense lies precisely in the way in which a state of anxious uncertainty is sustained by narrative delay. What lies in common to both forms of suspense is the condition of anxious uncertainty generated by the possibility of a good or bad outcome to a narrative. Where they differ is that in impure suspense, whether the outcome will be good or bad is an equal possibility, since the nature of the 'threat' encountered by the characters is an enigmatic one. In this context, the relative probability of a good or bad outcome to the narrative is not the distinctive suspense-generating mechanism; rather, suspense is generated by the withholding of narrative information that fails to bring clarity to the narrative situation and thereby sustains at once the possibility of a threat and our interest in finding out the nature of the threat.

One lesson of Hitchcock's work, then, is that there are at least two aesthetics of narrative suspense that correspond roughly to the objective and subjective aspects of suspense that Hitchcock distinguished in his 'Columbia Lecture.' The first aesthetic corresponds to the pure suspense situation in which the

spectator is placed in a position of knowledge superior to that of the character and elements of the scene are orchestrated according to a calculus of probability that intensifies the likelihood of an undesirable action, relative to the likelihood of a desirable action taking place. This kind of suspense is defined by a relative emotional detachment towards character psychology and the fate of character in favor of a logic of action and the calculus of probability. This aesthetic of suspense, in Hitchcock at least, often has a ludic, comic quality, displaying self-conscious awareness of the artful manipulation of the spectator it involves. The second aesthetic of suspense – 'subjective suspense' – corresponds to the impure suspense situation of 'suspenseful mystery' where narrative is suppressive about narrative outcome, and we are aligned to the psychology of a character rather than being placed in a position that is superior to them in the sense that we enter into the same sense of uncertainty about narrative events. This form of suspense aligns us with character feeling as opposed to detaching us from it, and typically, in Hitchcock's films, this involves an alignment with a female character, such as in Rebecca, Suspicion, or Shadow of a Doubt, or with a 'feminized' male character – that is, a male character who has been reduced to a situation of passivity or uncertainty such as characterizes the situation of Scottie (James Stewart) in Vertigo. This subjective aesthetic is much more serious; it leads us, for example, to experience the lure of perverse desire as in Rebecca, rather than making a joke out of it as in Rope.

Although Hitchcock's career tends to involve an alternation between these different aesthetics of suspense – for example North by Northwest (1959) follows Vertigo – many of his works combine both aesthetics. I have already described a paradigmatic case of objective suspense in Hitchcock's Sabotage but the same film also exhibits subjective suspense. After the death of Stevie we are encouraged to identify with the suffering Mrs. Verloc, who has not only lost her brother but also learns from her husband that he is responsible for Stevie's death. She wrestles with this knowledge as she begins to serve her husband's evening meal, and the proximity of a knife attracts her to the thought of murder. The question, 'What will she do?' is posed, and suspense is created through a delay of the answer. This narrative situation is particularly instructive because, while we anticipate that she might kill her husband, we don't exactly want her not to kill him, given what he has just done. We just want to know what will happen. Furthermore, what actually occurs defies our expectations. When Verloc realizes that Mrs. Verloc has her hand poised over the knife, he slowly edges around the table towards her, and the camera assumes his point of view as it tracks forward towards Mrs. Verloc as if he is being drawn towards her, not to prevent her but to be killed by her. When he arrives by her side he grabs for the knife, but she gets it first. The camera tilts up to their faces as he advances upon her slightly, and she (out of shot) drives the

knife in to him. The whole scene commences in silence – that itself generates anxiety by cueing us to the overwhelming, inchoate emotions experienced by the characters.

A Note on Suspense and Surprise

When mystery is entwined with suspense through suppressive narration, then surprise becomes a corollary of suspense, rather than being opposed to it in the manner suggested by Hitchcock's own contrast between suspense and surprise. Hitchcock's suppressive narration emotionally engages us, in part, because it encourages us to anticipate a surprise. Surprise contrasts with 'objective suspense,' but it is complementary to 'subjective suspense.' Furthermore, we also need to be careful to distinguish between surprise and shock. While objective suspense excludes surprise it does not exclude shock, for an event that is wholly anticipated can nonetheless be shocking when it actually occurs.[14] Shock is compatible with both objective and subjective forms of suspense.

Psycho functions as Hitchcock's tutor text in the relationship between suspense and surprise. Indeed, it illustrates the three fundamental relationships that obtain between them. The murder of Marion Crane comes out of the blue, and at first sight, seems like the case of Hitchcock's bomb suddenly blowing up from the table; that is, a question of pure surprise. As Steven Schneider points out, we do glimpse the murderer from a point of view inside the shower that is not that of Marion.[15] However, this moment of objective suspense does not lessen the overall surprise involved in killing off the heroine in the first reel, though it does allow us to anticipate the shocking event just before it occurs. In the second murder, we now think we know the identity of the criminal, and the case is one of pure suspense in which we fearfully anticipate the unhappy end of Arbogast. The death of Arbogast, while shocking, is not surprising. The sequence that leads up to Norman's attempt on Lila Crane's life illustrates a third relationship of suspense to surprise, for while Hitchcock appears to have revealed to us the identity of the killer, the narrative seems to be suppressing something through the evasiveness of Norman and suppressive strategies of the camera movement and placement. This suppression paves the way for the surprising and shocking disclosure at the conclusion of the film.

Hitchcock combines objective suspense, subjective suspense, and surprise in the famous sequence from The Birds (1963) where Melanie Daniels (Tippi Hedren) sits in front of the jungle gym waiting for the kids to finish school. At first she is oblivious to an alarming fact that the spectator is made aware of

from the beginning of the scene: birds are gathering on the climbing frame behind her. Hitchcock cuts back and forth between Melanie nervously smoking in the foreground and the birds progressively gathering in the background. This classic rendition of pure or objective suspense is accompanied by the mesmerizing repetition of the children's song that serves to mark out the passing of time. Then, Melanie notices a single bird in flight, and Hitchcock cuts from a reaction shot of Melanie looking to a long point-of-view shot of the bird flying that, in the context of the narration, serves to restrict our knowledge of what is going on and inclines us to anticipate Melanie's surprise and shock at what she will see when the bird lands. What she does see turns out to be surprising and shocking for the spectator also since, in the meantime, the birds have accumulated in quite massive proportions. The film then reverts again to an objective suspense structure but one in which the knowledge of the character is now, in contrast to the earlier sequence, aligned with that of the audience, and we fear, with Melanie, for the schoolchildren's lives.

Voyeurism, Eavesdropping and Suspense

Thus far, I have discussed the moral ambiguity in Hitchcock's work in relationship to his subversion of the moral structure of objective suspense. However, moral ambiguity is a factor that informs, and is indeed sustained by, 'subjective suspense.' As we have seen, Hitchcock subverts our customary moral allegiances by encouraging us to wish for an outcome that runs contrary to what is morally desirable. Suspenseful mystery in Hitchcock subverts our conventional moral allegiances in a different way. For while subjective suspense in Hitchcock does not always disguise or conceal a corrupt or perverse content, it invariably signals something that is perverse through the fact that suppressive narration takes on the aspect of a prohibition or censorship that conceals something taboo and thereby renders the character and the spectator who is aligned with him or her fascinated in the content of what the narrative conceals. Thus in Rebecca, the second Mrs. de Winter's fascination with the secret of Rebecca takes on the lure of something that is taboo through the manner in which, for example, the second Mrs. de Winter's interest in her dead predecessor is governed and mediated by the figure of Mrs. Danvers who clearly harbors an erotic attraction to her. As the second Mrs. de Winter approaches the door of Rebecca's chamber in the aforementioned scene from the film and pauses at the threshold, her gaze at Rebecca's door is overseen by Mrs. Danvers's gaze at her from off-screen.

As Arthur Laurents, screenwriter of Rope, suggests, Hitchcock was fascinated with 'kink,' that is, with sexual perversity or, more generally, with the idea that sexuality is perverse.[16] Sexuality is endowed with the aura of perversity in Hitchcock, precisely by being forbidden or being rendered in disguise. And by being disguised, sexuality is rendered as something alluring in a very Freudian way. Hitchcock deploys strategies of narrative and representational doubling derived from German Expressionsim in order to evoke the sense that appearances are a surface phenomema that conceal perverse secrets. But there is one strategy of conveying the core of perversity that lies within the mystery that is privileged by Hitchcock because of the manner in which it contributes directly to the staging of suspense through suppressive narration. Hitchcock connects suppressive narration with scenarios of eavesdropping or spying on something that is private or secret, taboo activities that, while they are not intrinsically wedded to a sexual motive or content, nonetheless often contain a sexual motive or content and are connected to such content by the fact of being taboo. The second Mrs. De Winter is consistently caught in this kind of situation, as, for example, when she is witness to the conversation between Mrs. Danvers and her dandy cousin Jack Flavell (George Saunders). Often, as in Rear Window (1954), eavesdropping or spying is represented itself as a form of voyeuristic fascination that colors the mystery with the aura of something that is taboo and implicates the spectator in the same prurient fascination as the character. By placing within the scene a character who takes an illicit fascination in a mystery, the mystery is thereby lent an aura of perversity, over and above the perverse connotations that it may already carry. But the significance of the voyeuristic scenario is not limited to the perverse coloration it lends to subjective suspense.

In his interviews with Truffaut and elsewhere Hitchcock fondly recounted the scene from Easy Virtue (1927) in which the telephone operator eavesdrops on a marriage proposal. Will the proposal lead to marriage? Hitchcock cites this as a suspense situation involving romance that does not include fear. But the context of his discussion with Truffaut also suggests this may be a case of what he calls 'suspense of situation,' in contrast to the kind of suspense that involves 'what happens next.' Of course, 'what happens next' is important to the representation of suspense in the scene; nonetheless, Hitchcock's idea of 'suspense of situation' is suggestive. The content of the suspense here is neither mysterious nor perverse; indeed, the situation presented is one of objective suspense that is morally conventional in its structure. But the suspense is embedded in a subjective situation that is one of eavesdropping on the private lives of strangers. In this way our engagement with the suspenseful 'narrative' that we are privy to hear over the phone line is given an aura of naughtiness. I have suggested that the depiction of a character as a voyeur can contribute to

subjective suspense by coloring mystery with the aura of something that is taboo, thereby intensifying the character's fascination with the content of the mystery. But what is portrayed in the Easy Virtue example is a character eavesdropping on a suspenseful narrative situation. The character's fascination may color our own interest in the narrative outcome, but, equally, what fascinates the spectator is the situation of a character being held in suspense. That is, the presence of the character renders the spectator's own relationship to narrative suspense an indirect one.

By staging the lure of the taboo in this way, Hitchcock allows the audience to experience the perverse pleasures of voyeurism vicariously in a position of relative safety. The presence of the character in the situation is a way of at once cueing the spectator to indulge in something that is taboo and 'permitting' the spectator to entertain the character's responses at a 'safe' distance. For example, throughout Rear Window, Hitchcock represents L.B. Jeffries spying on his neighbors in a manner that colors the nature of our interest in the evolving mystery of the Thorwald murder, and what fascinates us is not simply the outcome of the murder but the situation of the character being held in suspense itself. Consider, too, a scene from Hitchcock's film The Lodger where the ambiguously perverse hero who may or may not be Jack the Ripper, perched at the top of a 'Victorian' staircase – an ubiquitous feature of Hitchcock's works with its own connotations of the sexual secrecy that pertain to the upstairs rooms of the Victorian household – peers down, transfixed, at the heroine as she struggles to free herself from her policeman boyfriend who has handcuffed her at the culmination of a sexual chase. In staging the scene in this way, Hitchcock authorizes the spectator to enjoy the scene as a displaced expression of sexual perversity (sado-masochism) because we view it through the gaze of a character who is perhaps 'sexually perverted,' while at the same time he allows us to distance ourselves from this thought. In part, this distance is afforded by the very presence of the character of the lodger in the scene (we can pretend the perverse interpretation of what we see is being made by the character rather than by us), and in part it is achieved because the motivation of the Lodger himself is ambiguous (we can pretend that the Lodger's motivation is, like our own, actually quite innocent).

The staging of suspense in the context of voyeurism or eavesdropping functions in a manner analogous to Hitchcock's black humor. Both are 'aestheticizing' strategies that introduce the audience to the pleasures of moral corruption by giving them a disguised expression. Black humor 'allows' the audience to sympathize with the devil and wish for a morally pernicious outcome by placing us at one remove from the character and the situation by detaching us from our customary moral judgments. Hitchcock's staging of suspense as a scenario of voyeurism or eavesdropping allows the audience to vicariously ex-

perience the thrill of something that is taboo, but again, in a manner that detaches the audience from responsibility for their alignment. In both cases Hitchcockian suspense is characterized by a high degree of self-consciousness. Hitchcock invites the audience not simply to enjoy suspense but to become connoisseurs or aesthetes of suspense.

I have identified five aspects of Hitchcockian suspense that deviate from the case of pure or objective suspense that is a central point of departure both for understanding suspense and for understanding Hitchcock's practice of suspense. First, Hitchcock's work is marked by the inversion of moral co-ordinates, in such a way that he encourages the audience to take delight in the thought of something that is morally undesirable. Second, this inversion of moral co-ordinates may be supported by the use of black humor that fosters our identification with the narrative situation of the dandy or anti-hero and also serves to detach us from the suspense situation and encourages to take delight in the dastardly manner in which Hitchcock has subverted our customary moral co-ordinates. Third, Hitchcockian suspense is informed by mystery created by a suppressive or restricted narration that renders the character and spectator intrigued by what is, conventionally speaking, morally undesirable and transforms the conditions of transparency that govern the orthodox suspense situation. Fourth, narrative suppression in Hitchcock generates the promise of incipient surprise or shock. When suspense is entwined with mystery, surprise is its corollary rather than its antithesis. And fifth, fascination with the wicked and incipiently shocking is fostered by Hitchcock through the way in which his narrative secret is hedged about with taboos that inscribe conventional morality as a set of prohibitions that it is desirable to breach. Furthermore, the spectator's engagement with a supenseful situation is itself represented as a form of eavesdropping or voyeurism and hence something that is taboo. Thus, the suspenseful situation becomes a source of fascination and pleasure in its own right.

Although Hitchcock invokes orthodox or pure suspense in its morally conventional form, the defining characteristic of Hitchcockian suspense is its impurity that is in part defined by the inversion of the customary moral co-ordinates that structure the pure suspense situation and in part by the suppression of key information pertaining to the nature of the narrative situation. The position that Hitchcock invites the spectator to occupy is one in which they are forever at the threshold of something forbidden, that is just out of reach, and one in which they entrust themselves to Hitchcock the narrator to orchestra their access to the forbidden fruit whose content must remain elusive for the suspense to be maintained. Within the anodyne public moniker of 'Hitchcock – the master of suspense' is the wickedly playful persona of 'Hitchcock – the master of ceremonies' who introduces 'the public' to taboo secrets, like a Dr.

Caligari who threatens to expose the contents of his 'cabinet' to the shocked and thrilled onlooker. Nonetheless, Hitchcock always sought to introduce the public to those secrets in a manner that maintains their disguise and that resists a lapsing into 'bad taste' or sheer exhibitionism – though, of course, his whole career involved exploring the limits of what 'the public' was willing to be exposed to.

Notes

1. Carroll first set out his theory of suspense in 'Toward a Theory of Film Suspense,' reprinted in *Theorizing the Moving Image* (New York: Cambridge University Press, 1996), pp. 94-117. He restates the theory in more formalized language in 'The Paradox of Suspense,' in Peter Vorderer and Hans J Wulff eds. *Supsense: Conceptualizations, Theoretical Analyses, and Empirical Explanations* (Mahwah, New Jersey: Lawrence Erlbaum Associates, 1996), pp. 71-92.
2. Deborah Knight and George McKnight, 'Suspense and Its Master,' in Richard Allen and Sam Ishii Gonzalés eds. *Hitchcock: Centenary Essays* (London: BFI, 1999), p. 108. For Hitchcock's comments on suspense and romance see Alfred Hitchcock, 'Lecture at Columbia University' (1939), in Sidney Gottlieb ed. *Hitchcock on Hitchcock* (Berkeley: University of California Press, 1995), p. 272; François Truffaut, *Hitchcock* (New York: Simon and Schuster, 1985), p. 72.
3. Murray Smith draws attention to this aspect of Hitchcock's work in *Engaging Characters: Fiction, Emotion and the Cinema* (Oxford: Oxford University Press, 1995), pp. 217-18.
4. Carroll dubs this morally neutral theory of suspense the 'universal theory' in contrast to the 'general theory' that is defined by moral parameters. See Carroll, 'Toward a Theory of Film Suspense,' p. 112.
5. Thomas M. Bauso, 'Rope: Hitchcock's Unkindest Cut,' in Walter Raubicheck and Walter Srebnick eds. *Hitchcock's Rereleased Films: From Vertigo to Rope* (Detroit, MI: Wayne State University Press, 1991), p. 233.
6. Susan Smith, *Hitchcock: Suspense, Humor, and Tone* (London: BFI, 2000), p. 9. Hitchcock subsequently regretted blowing up Stevie because it offended the audience who sympathized with Stevie. See Alfred Hitchcock 'The Enjoyment of Fear' (1949), in Gottleib ed. *Hitchcock on Hitchcock*, p. 121. Clearly the audience were not ready for Hitchcock's black humor. By the time of Frenzy (1972), his audience appears to have caught up with him, even though he was again accused of lapsing into bad taste. See Adam Lowenstein, 'The Master, The Maniac, and Frenzy: Hitchcock's Legacy of Horror,' in Richard Allen and Sam Gonzalèz eds. *Hitchcock: Past and Future* (forthcoming, Routledge).
7. Ibid., p. 57.

8. James Naremore, 'Hitchcock and Laughter,' paper delivered at 'Hitchcock: A Centennial Celebration,' New York University, 1999. Forthcoming in Richard Allen and Sam Ishii Gonzaléz eds. *Hitchcock: Past and Future*.
9. Truffaut, *Hitchcock*, p. 72.
10. Roland Barthes, *S/Z*, trans. Richard Howard (New York: Hill and Wang, 1974), p. 19.
11. Hitchcock, 'Lecture at Columbia University (1939)' p. 272.
12. Ibid.
13. Truffaut, *Hitchcock*, p. 73. Susan Smith's useful discussion of suspense in Hitchcock is marred by her failure to reference sources other than the Truffaut interviews.
14. Steven Schneider notes the compatibility between shock and suspense in 'Manufacturing Horror in Hitchcock's Psycho,' *Cine-Action* 50 (October 1999), p. 71.
15. Schneider, 'Manufacturing Horror,' p. 72.
16. See 'Working with Hitch: A Screenwriter's Forum with Evan Hunter, Arthur Laurents and Joseph Stefano,' *Hitchcock Annual*, (2001-2), p. 13.

From the Air

A Genealogy of Antonioni's Modernism

Noa Steimatsky

For a Film on the River Po

On April 25th of 1939 – designated also as the year XVII, the seventeenth year of the Italian Fascist regime – Michelangelo Antonioni, film critic, publishes in the magazine *Cinema* an article accompanied by photographic illustrations: 'For a Film on the River Po.'[1] Though he had previously written for the local *Corriere Padano* published in his native Ferrara, Antonioni's article in the prestigious Roman film magazine with national circulation can be seen to constitute a first statement of intentions regarding filmmaking. While it has lent itself to association with early writings on Neorealism, the article binds its regionalist-documentary pretext with a modernist imperative. Modernist movements and styles, such as the Second Futurism, Art Deco, Abstraction, and Rationalism, persisted and circulated under Fascism. Neorealism sought to avoid these tainted modernisms, turning to realist narrative fiction in its attention to the regional, the quotidian, and the marginal. Yet already sensing the realist fallacies and sentimental pitfalls of what was emerging in the late 1930s as a Neorealist agenda not sufficiently distinct, perhaps, from that other Fascist cultural force – heroic, mythologizing, reactionary regionalism – Antonioni can be seen at this early moment to search for a distinct mode of articulating his own Neorealist bent in modernist terms. This process I shall gloss by reference to Italy's 'aerial' culture in the 1930s, and to Antonioni's chief editor in *Cinema*, Vittorio Mussolini – the Duce's son, military pilot, and promoter of Italian film. The article in this way exhibits tensions that the humanist tenets of Neorealism will, by and large, seek to subdue in the immediate post-war period, situating Antonioni in an oblique relation to the aspirations of his colleagues; it betrays the ambivalence of a formative moment – historically emblematic – when diverse, indeed contradictory, trends in late-Fascist Italian culture converged.

While apparently focused on limited subject matter – on specific problems of documentary filmmaking and the cinematic rendering of the particular re-

gional landscape – 'For a Film on the River Po' raises questions on the ways in which location shooting complicates the relation of documentary to fiction filmmaking. It evokes even larger questions on the relation of profilmic actuality to rhetoric and poetic functions, the relation of landscape and history, of the consciousness of place and the national imagination. All of this may not have been immediately apparent in 1939. Even anthologized as it is today, the text of this article may not suffice to clarify Antonioni's oblique relation to this early Neorealist moment. Its literary, searching, meandering style evolves in a series of negations: Antonioni dwells on what filmmaking should *not* be, and only begins to envision in this way what it might become. Yet surrounding this convoluted text, the photographic illustrations – not reproduced or discussed in subsequent reprints and translations – make salient a modernist consciousness seeking clarification *vis-à-vis* diverse modes of landscape representation.

The text opens with what may be an allusion to the 'pathetic fallacy,' following Ruskin's celebrated formulation, in the Romantic grasp of landscape:

> It is not a pathetic affirmation to say that the people of the Po region are in love with the Po... In what does this *feeling* concretize itself we know not; we do know that it is diffused in the air and that it is sensed as a subtle fascination. This is, actually, a phenomenon common to many places traversed by large waterways. It seems that the destiny of these regions coalesces in the river. (p. 255)

Even as he is cautious about projecting a subjective mood upon the landscape, Antonioni maintains here a notion of *genius loci* – a spirit of place that would figure, by means of the river, the 'destiny' of the region as a whole. Yet Antonioni goes on to describe this 'destiny' via the material, economic, and social terms dictated by the river, which thus lends itself to culture, and to art. The river in this way becomes a figure for temporality and change in the consciousness, the imagination of its people. The yearly floods punctuate the life of the river, dramatizing the continued confrontation of the forces and rhythms of nature *vis-à-vis* human endeavor and its modern sense of time. For:

> ... the years did not pass in vain [not for people and] not even for things. There came also for the Po the time to awaken. And then there came iron bridges on which long trains clanged day and night, there came six-story buildings spotted with enormous windows vomiting dust and noise, there came steam boats, docks, factories, fuming chimneys, even more canals with cemented levees; this was, in short, an altogether modern, mechanical, industrialized world that came to turn upside down the harmony of the old one. And yet in the midst of this dissolution of their world, the population had no regrets. (p. 257)

The grand historical movement from a pre-industrial 'golden age' to modernity brings forth the river from a background function into active participation

in the life of the present: in industry, technology, and communication. This revolution Antonioni describes as no cause for nostalgia – perhaps because the past was not so golden or harmonious after all. But one might be cautious as well about sentimentalizing the vision of progress that Antonioni lays out. His concern is how to adjust human imagination to modernity. What begins to emerge here is the conviction that recurs in Antonioni's later writings, namely, that cinema is instrumental in this process of adjustment – and that it is especially suited, as a medium, to this mediating role between the modern environment and human perception and consciousness in transition. In effect, Neorealism was to position itself six years later in an analogous mediatory, or rather, reconciliatory role between a devastated, fractured reality and the recuperating consciousness, and traumatized *conscience*, of those who will have survived Fascism and the war. But, as we shall see, Antonioni will want to reconcile, in Neorealist terms, Fascist modernism with an emerging consciousness of its problematic bequest in post-war cinema.

The text of the essay suggests that cinema as a medium may intrinsically promote such a mediation between the contemporary environment and its people's cultural consciousness. Antonioni's conception of the movement of modernity, for which the movement of the river itself is a metaphor, becomes vaguely synonymous with a notion of film as such, though the latter must still be crystallized for its medium specificity. 'All this,' Antonioni states, 'can seem to be but is not literature. It is, or wants to be cinema. It remains to be seen how it can be translated into practice. First of all there arises a question: documentary or fiction film?' Antonioni's suggestion of a special adequacy of the modern landscape to the cinematic medium may be problematic but in questioning the *mode* by which cinema can articulate this landscape in transition; in going on to complicate, as he does, the notion of *documenting* as well as that of *narrating* the landscape, Antonioni in effect problematizes that which many of his colleagues on the pages of *Cinema* will take for granted. For Neorealism will go on to claim a privileged status exceeding traditional generic classifications, uproblematically colliding a 'correct' aesthetic and ideology that is *guaranteed* – so Neorealism implied – by shooting on location in hitherto neglected (and thereby realist) sites.

A documentary that would develop via juxtaposition of picturesque detail and images of rural culture past and present, Antonioni fears, might lend itself to rhetorical cliché. While praising Pare Lorentz's 1937 film of the Mississippi, Antonioni is wary of 'the trite formulas of "as it was vs. as it is," "before and after the cure,"' and 'the eternal river.' The American example suggests to him, perhaps, a lack of historical interrogation in an abbreviated passage from nature to modernity. Overdetermined narratives of progress and destiny, set in a mythified landscape, were certainly a reigning principle of Italian documenta-

ries – not only of fiction films – of the period. In envisioning, perhaps, a modernist medium specificity to match the modernized landscape, Antonioni rejects here, as well, a certain hybrid of narrative and documentary that he associates with Robert Flaherty's work that would obscure the rigorous command of form, the precision and clarity of purpose that he seeks in the medium of film. He rejects folklore and anecdote, as well as the projection of sentiment that documentary propaganda and narrative or dramatic rhetoric might impose. In the essay's closing phrases he begins to describe, albeit rather enigmatically, a notion of a film that bypasses generic classifications and approaches instead an identification of the spirit of place with a purer cinematic vision:

> It suffices to say that we would like a film having as protagonist the Po, and in which not folklore – that is, a heap of extraneous and decorative elements – draws attention, but the spirit – that is an ensemble of moral and psychological elements. A film in which not the commercial need prevails, but the intelligence.[2] (p. 257)

Although he advocates precision and clarity as cinematic virtues, Antonioni's writing here is rather affected and often obscure. Testing and erasing, as it were, tentative accounts of the Po river as the subject for film Antonioni may be seen to channel diverse Neorealist inclinations into what is ultimately a more radical position. Yet he cannot yet formulate this position as a positive, material aesthetic. In paring down 'extraneous' – decorative, folkloristic, propagandistic, narrative, sentimental – elements from his envisioned film of the Po, he still seeks an intrinsic 'spirit' of the landscape. His implicit critique of the pitfalls of Fascist production – some of which elements survived in Neorealism – remains a generalized negation, not offering yet a coherent alternative but resorting to vague notions of unmediated, a-rhetorical, idealist 'essence.' Could the camera's encounter with the profilmic yield a 'moral and psychological' reflection quite independent of the 'extraneous' surface of visual reality – the everyday, material, economic, and social life of the river that Antonioni cites earlier? And if this spirit of place is distilled, would it not bring with it remnants of a Romantic vision of landscape? A fantasy of reconciling profilmic actuality with a poetics of 'essence' and 'spirit' emerges in these closing lines. Implicit here, as well, is Antonioni's identification of this 'spirit' with an 'intelligence' proper to film as such. But the text of the essay fails to confront the difficulties of this proposal. In practice, Antonioni's post-war documentaries and, most famously, his fiction film work launched in 1950 went on to explore imaginative resolutions to such problematic terms. His discovery of the possibility of abstraction in the object and his concretizing, even narrativizing, of the void – the 'interstice' between objects and between representations – are widely discussed in the literature.[3] But the genealogy of this aesthetic, its pre-

cise modernist makeup, and its cultural-historical provenance remain to be addressed. In fact, at this early stage the possibility of resolving a Neorealist landscape and a modernist consciousness can only be articulated in contradictory, fragmented terms. But more coherently than the written text, the photographic illustrations surrounding it – taking up more than double its space – step in where language fails to confront that which 'is not literature' but 'is or wants to be cinema.' And it is this visual essay, running alongside the verbal one, that makes salient those aspects of contemporary Italian culture that inform the inception of Antonioni's thought.[4]

Organized in groups, the first eight of the nine stills share a horizontal format approximating a cinematic aspect ratio. The first pair (fig. 1) jointly titled 'Nets for fishing in the Po waters,' might suggest the reframing of objects within a single cinematic shot whereby a camera movement linked two views of these elaborate contraptions of bent reed, supporting a fishing net on the bank of the river. With the change of angle from the first to the second still, the principal lines of the net slice geometrical sections out of the landscape and intersect exactly with the line of the distant riverbank. The sense of distance and perspective is thus negated in favor of sheer graphic relations of triangles and quadrangles of landscape parts, further flattened and summoned forth towards the photographic surface by the screening function of the net, which diffuses the expansive view of the river extending to the high horizon.[5] If in the first still the net's graphics were figured *against* the landscape-as-ground, the second begins to disrupt the figure-and-ground dichotomy, locating this transformation in the opening up of possibilities of re-framing and movement *between* the two images. Such implication of movement as a product of shifting graphic relations is repeated in the essay's other photographic groupings.

The three stills on the facing page where the text begins are jointly titled 'The banks of the Po' (fig. 2). All three frame river and bank laterally, with the perpendicular shapes of trees and vegetation distinct against a lighter background. In the first, the branches constitute the foreground; in the second, the middle ground; and in the third still, the river fills the foreground while a slim row of trees is synonymous with the horizon line. In sequence, these images describe a movement of distancing of figures against the alternately stacked water – bank – sky elements, combined with the suggestion of lateral motion along the river. Following this exercise in figure and ground relations, the next page is divided between a pair of photographs jointly titled 'Day and Night on the Po' (fig. 3) and contains the only human figures in the entire sequence, silhouetted and puny under the high horizon. Both stills are dominated by large expanses of water that approach the frame in magnitude, effecting an interplay of surface and depth, reflection and opacity. The water surface becomes comparable thereby to the surface of the photograph itself.

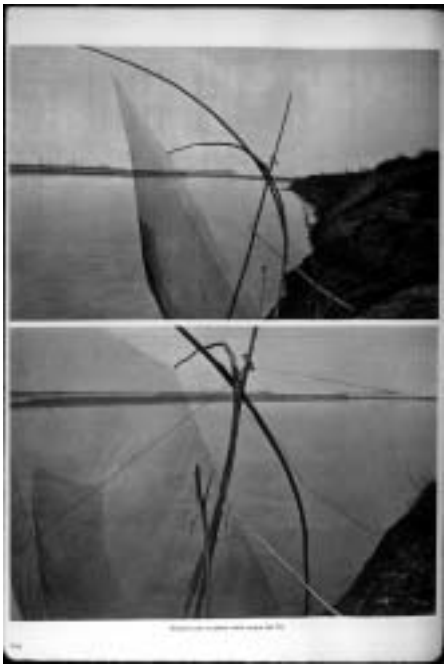

Figure 1

Figure 2

Fig. 1-4 'For a Film on the River Po.' Antonioni's entire essay as first published in *Cinema*, April 25, 1939, pp. 254-257

As the top photograph's caption on the last page of the essay (fig. 4) indicates, this is the bank of Pontelagoscuro, the small town on the south bank of the Po that will serve years later as the first stop in the protagonist's unhappy voyage in Il Grido (1957). This is familiar landscape to Antonioni. Ferrara, his native city, is just a few miles from here. And as we are on the outskirts of an urban center, the built riverbank with its railroad bridge exhibits the first marks of industrial modernity in relation to what were thus far pure rural landscapes lacking clear contemporary orientation. Directly below this photograph, in the only vertical format of the series, is the last still – but it is one that, in fact, could be rotated and viewed in any angle. This 'Aerial View of Pontelagoscuro and of the Railway Bridge to Padua' is centered on the same site but frames a much wider scope of the landscape, complete with factory buildings evidenced by massive chimney smoke and a network of what appear to be warehouses, canals, and roads. Whatever marks of modernity we already noted are now heightened, for the camera work involved here is itself even more emphati-

Figure 3

Figure 4

cally part of this modernity. And whatever human dimension, scale, and viewpoint may have marked the previous stills, it now seems radically altered as we identify this photograph as part of a photogrammetric or else military project whose aim is objective, instrumental cartography or reconnaissance.[6]

Here Antonioni's visual essay ends. The striking terms of this conclusion to the photographic sequence may serve to crystallize what in effect remains obscure and mystifying in the written text. For the aerial photograph does suggest a correspondence between the modern landscape and its mode of representation – between modernity and modernism, concretely and historically placed. Is this the correspondence Antonioni was seeking? Of what does it consist? Does it suggest a new cinema that can exceed conventional compartmentalizing of landscape as graphic/geographic fact and as cinematic location, of technology and poesis, of documentary and fiction? Does this 'spirit of place,' this topographically and perceptually specific 'intelligence' of the medium transcend circumstances, the weight of historical and political connotations? How can the Italian landscape, propelled into modernity during Fascism, be accommodated by the emerging Neorealism while fulfilling a modernist program?

With the aerial image it is no longer, then, sheer formal correspondences between the landscape and its photographic conditions of representation, discerned in the first eight stills, that informs the modernist consciousness emerging in these pages. As the ninth, aerial photograph brings this correspondence to its limits, we acknowledge that it is not merely the graphically abstracted view or the industrial contents that are at work here. The aerial photograph betrays a desire – suited, we shall see, to Fascism's inclinations in the late 1930s – for a controlling, unifying perception capable of crystallizing reality as an aesthetic object. But Antonioni's documentarist's conscience is also drawn by the lesson of photographic contingency, amplified by the sense of movement and temporality that the *sequence* brings forth: the always specific, indexical images that testify to the changing, the tentative, the relative. How might documentary cinema respond to the tensions between the tainted and the salvaged, the changing and the persistent, between traditional *auratic* fullness and its modern depletion in the regional landscape, between an earlier modernist moment and its necessary revision in light of what has come to pass? Neorealism's marginal, unheroic regional sites, its dialect expressions, its quotidian works and days, its realist narratives often privileged altogether pre-Fascist, primarily nineteenth-century naturalist models – literary *Verismo* and the *Macchiaioli* in painting – or earlier ones deemed uncontaminated – as were Italian modernist avant-gardes – by Fascism's embrace. But in the late 1930s, the aerial photograph is itself tainted thus. In the following pages I shall map its contexts and connotations in Italian culture, starting from Antonioni's immediate circle and going on to chart the difficulty, but also the promise of Antonioni's aspiration at this moment. Avoiding the frequent Neorealist effacing of such difficulties in fiction film, Antonioni will work through them by first casting his modernism in documentary terms. The lesson of the aerial photograph, tied in fact to the historical moment, will project forth as a powerful paradigm in his work.

The Aerial and the Regional in Italian Fascist Culture

The aerial photograph emblematizes spatial perception in modernity. The aerial views of Nadar, who turned his lens on 1856 Paris from a balloon, foreshadowed developments in aeronautic and short-exposure photography during the First World War.[7] Military or cartographic applications of these distant, compressed landscape photographs – decipherable by specialized scientific reading – appealed to a range of modernist and avant-garde artistic sensibilities.[8] For Le Corbusier the airplane is itself a supreme example of the selective

achievement of functional comprehensive form, while the aerial view affords a modern perception par excellence – one which unmasks the no longer viable traditional forms of landscape representation and urban planning. The camera's instrumental, automatic, indexical claim is amplified by the apparatus that bears it, the airplane, promoting the photograph's evidentiary, realist function – the iconic relation between image and landscape. Yet the anti-illusionistic effect of the aerial photograph has lent itself not only to 'scientistic' but also spiritualistic conceptions of abstract art by departing from ordinary perceptual notions of resemblance and the identification of figures that relies on upright and thereby anthropomorphic parameters, as well as on a sense of scale, depth, concave and convex, and figure and ground relations. Hitherto imperceptible forms – abstract patterns emerging to perception for the first time – now suggested the possibility of a hidden reality that awaited this lofty view of the whole, as if pertaining to some grander plan registered by the workings of the photograph's surface optics.[9] This was one way to conceive of abstraction as already inherent in the environment, reconciling the difficulty of non-representational art with the realist, testimonial value of photography.[10]

The aerial view can be construed, then, as a limit case for photography. The ontology of the photograph as such had already intimated the absence of the human agent from the traditional role of the artist. More radically so, the human figure disappears from the position of both viewer and viewed in the aerial photograph. From a vertical axis the figure registers, if at all, as the most minute graphic mark: a dot, a trace of its former self and thereby, we might say, a sign of its own absence. The human figure no longer indicates scale and distance; it is no longer the measure of things. And as the landscape is thus vacated, becoming a cartographic notation, it becomes alien to itself. The ideological ambivalence underlying such a condition has been addressed in Siegfried Kracauer's writings on photography and on the Mass Ornament in the late 1920s.[11]

But one need not even go the short distance from Italy to Germany, and to these wider theoretical grounds, to trace the problematic connotations of the aerial photograph in Fascist Italy and in Antonioni's immediate *milieu*. Italy of the late 1930s, fresh from its colonial exploits in East Africa and the declaration of empire, glorified and romanticized aerial warfare, harnessing a range of cultural resources – both popular and elite-modernist – in its celebration. The authentic Italian invention of Fascism drew on such resources in its rendering of politics and of war itself as aesthetic spectacles: such perception, we know, lies at the core of Fascism's very definition. The encompassing, inspiring, abstract beauty of the aerial view in that historical moment cannot be quite detached, then, from the aggressive, militarist, and imperialist uses of such images: the

superior possession of vision and knowledge that aerial reconnaissance affords often prepared for the actual – not formal or metaphorical – controlling or leveling of the terrain by aerial bombardment. The aerial view had thus come to embody the perfect aesthetization of Fascist aggression.

All this could not have been far from view on the board of the magazine *Cinema* where a glaring exemplification of these cultural intersections may be located in the person of Vittorio Mussolini, the Duce's son. Mussolini the younger had just moved from aviation on the African colonial front to the forefront of Italian film culture, becoming involved in film production and, in 1938, becoming editor of *Cinema*. Just prior to this, capitalizing on the general excitement over the war in Abyssinia, he published in 1937 a popular account of his aerial exploits, illustrated by aerial photographs with such captions as 'A pretty burst of bombs.' These are matched by descriptions such as this:

> I still remember the effect I produced on a small group of Galla tribesmen massed around a man in black clothes. I dropped an aerial torpedo right in the center, and the group opened up just like a flowering rose. It was most entertaining.[12]

Back in Italy and into the movies, Mussolini contributed to the production of Goffredo Alessandrini's vastly successful fiction film Luciano Serra Pilota (1938) that celebrates Italian aviation. The film, allegedly titled by his father, *Il Duce*, weds the persistence of Italian patriotism, heroic-paternal values, and nostalgia for one's native region, to the ambition to expand the horizon through flight, itself synonymous here with imperialist expansion. Puzzlingly, Vittorio himself was credited as *auteur* in two raving reviews of the film by Michelangelo Antonioni.[13] The passion for aviation and for cinema were continuous for the young Mussolini; applying the heroics of one to the other held a fascination also for the discerning film critic.

Vittorio Mussolini would have had access to such images as the aerial photograph of Pontelagoscuro, perhaps from military maneuvers in the Po Valley.[14] At least he may have raised or inspired the idea of the aerial photograph that concludes Antonioni's vision of a film devoted to a regional landscape with such a departure from traditional imagery. My suggestion of shared 'authorship' here bears, I believe, some metonymic potency; even figuratively it is at least as suggestive as Antonioni's ascribing of Luciano Serra Pilota to his senior editor. What matters are the connotations and contexts made salient by these professional and personal ties. It takes a full-fledged Fascist sensibility like that of Vittorio Mussolini, or like F.T. Marinetti's, to explicitly glorify – always from a distance or from the air – the destructive, deathly perception of war.[15] But attenuated and, incredibly, still optimistic versions of this aesthetic were evidently still prevalent in the late 1930s despite the exposure of Fascism's worst faces in the colonial misadventure in Africa and the racism devel-

oped in its wake, culminating in the pact with Hitler. Now, Antonioni's hesitant text and its illustrations certainly do not prescribe such full-fledged Fascist visions, but they are not neutral, either. The rejection of nostalgic regional lore and decorative anecdotes of progress may be seen, in retrospect, to offer some resistance to folk mythologizing and heroic melodramatic aggrandizement – Fascist or otherwise. But does it confront that other, unifying and universalizing, possessive vision of the regional landscape manifest in Fascism's expansionist policy, that could convert such a modernist image of the terrain in its favor?

As an officially sponsored '*Organo della Federazione nazionale fascista dello spettacolo*' ('Publication of the National Fascist Federation of the Performing Arts'), and under the auspices of one so intimately identified with the establishment, the magazine *Cinema* could offer considerable protection to its contributors, so many of whom were eventually to be aligned with dissident anti-Fascist culture. Did they need protection? Italian Fascist cultural policy – not monolithic and exclusionary, at least not when compared to its German correlative – was confident in its power to mutate almost any text, any discourse in its favor, even if only by virtue of the absorbing proximity of the regime that would thereby perpetuate itself in the public eye.[16] It is thus that on the pages of *Cinema* – within the limits of its ephemeral newsprint surrounded with period Deco graphics, advertisements for airline service to Addis Abeba, for Kodak film, for Coty face powder, perfume, and toothpaste – one could find, in the late 1930s, articles attending to the marginal, the anti-monumental, the unheroic Neorealist vision of Italy.[17] Yet regionalist trends, which were to acquire distinct anti-Fascist connotations in post-war culture, in fact developed right out of Fascist *strapaese* – the glorification of rural life in keeping with Fascist folk mythology in the 1930s.[18] While these proto-Neorealist elements on the pages of *Cinema* were most likely read in light of Fascist regionalism, a dissident culture, as well as action, did eventually emerge from the midst of *Cinema's* contributors. Diverse positions and styles could suggest Fascist affinities on some level in the face of the regime, but many could also be seamlessly channeled to anti-Fascist ones in later years. *Cinema* in this way exemplified, up to a point, the assimilative cultural policy of the regime: not a properly 'pluralistic' outlook but rather one that sought to transform – if necessary by repressive measures – any and every material into self-serving cultural assets under the guise of apparent tolerance. Such was the insidious cultural makeup of Italian Fascism. Perhaps it is no wonder, in this light, that so *few* artists and intellectuals had to leave when they could continue working with relative freedom at home, right under its auspices.[19]

Certainly the Italian landscape image and its re-fashioning for modernity was a prime arena in which different trends competed for attention and sup-

port. As no single uniform style or mode was officially endorsed by the regime, variants of modernism, regionalism, neoclassicism, and other historical revisitations competed – most emphatically in the field of architecture, where the stakes and public consequence were greater in the re-molding of Italy as an imperial center. In 1939, when Antonioni worked for the World's Fair planned for 1942 in celebration of the twentieth anniversary of the Fascist revolution, the 'E-42' was already a vast arena of struggle between modernist-Rationalist architecture and monumental Classicism, often construed as Italy's 'home style.' Just outside of Rome, EUR, as the fair site is now called, still exhibits the tensions *and* compromises evinced in this struggle, where one style could be maneuvered to tame the other.[20] Regionalist elements could be used to domesticate the open, trans-national Rationalist aspiration of Italian modernist architecture. At the same time, the potentially disruptive diversity of Italy's regional cultures could itself be contained under the progressive unifying modality of a modernist outlook. Italian Fascism's assimilative power thus acquired great sophistication and was evidently still effective in the late 1930s when, even after the exposure of its worst face, a lively and, to a point, open debate on style in modernity continued under the regime.

Italy's earlier and most influential avant-garde, Futurism, was itself revived in the thirties with the school of *Aeropittura* (aerial painting) that registered the continued assimilation of universalist modernist aspirations within what was at times a nationalist and imperialist, at times a regionalist impulse, or all of those. Perhaps capitalizing on the imaginative force of the figure of Gabriele D'Annunzio as militant pilot-artist, *Aeropittura* extended Futurism's original engagement with the dynamism of modern life with the new beauty of flying machines that revolutionize the human environment, or else destroy it – also cause for Futurist celebration.[21] These ideas were articulated in a 1929 manifesto and an exhibition of forty-one *Aeropittori* in Milan in 1931. Insofar as this 'Second Futurism' rehearses earlier concerns, it can be read as regressive when compared with the original, heroic first, whose militant connotations would have turned sour for many, if not by the mid-twenties then certainly a decade later.[22] It seems, however, that the aviational exploits in East Africa themselves re-invigorated the aerial imagination of Marinetti and his retinue. The manifestos, posters, murals, set and pavilion designs, architecture, sculpture, painting, and photography identified under the larger umbrella of *Aeropittura* celebrated the conquering and liberating of space and perception from the forces of gravity and from a traditional, limited human viewpoint. E-42 itself, in both realized and unrealized projects, exhibited elements of this *aero*-culture: Adalberto Libera's Palazzo dei Congressi incorporated open metal trusswork shaped like airplane wings; plans for an unrealized symbolic arch promised a soaring, gleaming gateway not simply to the

Fig. 5 Gerardo Dottori, *Umbria* (oil, 1934). Yale Photo Collection

sea and Empire beyond but also, by the suggestion of ascensional force, towards cosmic space upward from the horizon. The vast open spacing of buildings, the perspectival views stretching to infinity, the celebration of progress and communications on a grand scale suggest a utopian order whereby even from the earth the viewer is transported beyond human measure, beyond the terrestrial landscape.

Aeropittura could stress, then, a spiritualistic sublimation of its potentially aggressive, militarist and imperialist connotations in notions of auratic beauty and mystic power, the intoxicating embrace of a Fascist sublime. Gerardo Dottori's aerial landscapes perhaps epitomize this configuration. They are often dynamized by circular forms, at once drawn from the landscape yet suggesting the whirling, ascending experience of flight itself. Landscape configurations are matched by rounded horizons that evoke the shape of the earth in a cosmic scale (fig. 5). Diverse perspectives, dimensions, and scales simultaneously dynamize the image in good Futurist form. But what these works demonstrate as well is the interlacing of such modernist concerns with regionalist materials: Dottori's recognizable Umbrian landscapes, the roofs and bell towers of Perugia, and the gulf of La Spezia are matched with a cosmic suggestion of the bluish distance where entire towns, rivers, and gleaming lakes float

Fig. 6 Filippo Masoero, *From the Airplane* (aerial photograph, 1935). Yale Photo Collection

upward on the surface of the canvas. In these and numerous other examples we witness the confluence, through the aerial point of view, of regionalist impulses, nationalist/imperialist sentiments, and a universalist modernist engagement with the conditions of perception and representation at large.[23] Critics have suggested that it is precisely due to this confluence that *Aeropittura* served to disseminate modernist culture in 1930s Italy while cultivating de-centered, heterogeneous, 'local avant-gardes.'[24]

Aeropittura aspires to capture the regional landscape from outside itself, from a dynamic, technological viewpoint that, finally, identifies the airplane with the camera. The Futurist photography manifesto of 1930 promotes both photographic and aerial vision as supplanting traditional notions of a humanist pictorial landscape.[25] *Aerofotografia* offers instead vast terrains and entire towns captured from above. Familiar landscapes, rural and urban, from oblique and vertical aerial viewpoints, or nearly abstract optical tracing of landscape elements achieved by long or repeated exposure in acrobatic flight – as performed by Filippo Masoero over the center of Milan – emphasized vertiginous height, the sensation of soaring or plunging at great velocity, shifts of scale and perspective that dynamize space, bringing a new consciousness even to familiar urban monuments or regional features (fig. 6).[26] Masoero,

whose photography lent itself to avant-garde sensibilities, was in fact a fiercely patriotic fighter pilot who had associated with D'Annunzio and Marinetti and, devoted to photography and cinema, was appointed in 1930 as director of the Istituto LUCE (L'Unione per la Cinematografia Educativa) in Rome.[27] Artistic explorations of innovative image technology appear inseparable from the Fascist cult of militarist and imperialist power. We might say that in aerial culture a modernist utopia of a Futurist universe made local, and a vision of Italy made universal lent themselves to Fascism's containment of oppositions and to its desire to command space in all of its dimensions.

Italian fiction film of the period responded to these ideas, though its binding of the regional and the modern was often thematized through generic plot devices. Alessandrini's Luciano Serra Pilota, a semi-autobiographical account of Filippo Masoero's experience, tells of a pilot (Amadeo Nazzari) and his son separated by the father's acrobatic flight work abroad; they are climactically reunited when the son, who has since become a pilot, is shot down, only to be rescued by his father on the Ethiopian front. The film surely suggested to its audience the persistence of Italian values, family ties, local patriotism, and the nostalgia for one's native – here distinctly north Italian – home, alongside the ambition to expand the horizon, through flight technology *and* imperialist expansion. Heightened melodramatic expression alternates with impressive location work involving masses of extras and the expertise of aerial cinematography. Inevitably, the conflation of these elements is subjugated to a propagandistic imperative that sentimentalizes the technology, positing imperialist warfare – epitomized by aerial exploits – as an emotionalized force of nature.

Other fiction films in the 1930s similarly narrativized, in ways analogous to the paradigmatic engagement with aerial themes and forms, a smooth incorporation of modernity in traditional, often regionalist values. Alessandro Blasetti directed some of the exemplary feature films in this vein: in Terra Madre (1931) an urban culture of fast cars and jazz gives way to ultimately anti-modern, folkloristic ideals of *strapaese* to allow the wedding of old wealth and agrarian labor in central Italy.[28] Blasetti's 1860 (1934) historicizes this fusion of the regional and the modern by focusing on the participation of the Sicilian peasantry in the new myth of national unification forged in the Risorgimento. His Vecchia Guardia (1935) dwells on the 'natural' continuity between the authentic vital elements of provincial life and the imperative of the March on Rome. Also Roberto Rossellini's La Nave Bianca (1941) and Un Pilota Ritorna (1942) exemplify an unproblematized assimilation of older values of family and romance in an aestheticized yet fierce Fascist technological culture. Something of an exception to this paradigm is Francesco De Robertis's Uomini sul Fondo (1941), where the workings of a stranded submarine – its spaces, its dictating of perception, the distinct functions of its per-

sonnel – are all rigorously explored with only the briefest sentimental punctuation. While harnessed by military propaganda, Uomini sul Fondo is a film without stars, making use of actual seamen and largely authentic sets; its engagement with functional form and the perceptual conditions of modernity is thus grafted on a proto-Neorealist mode. Yet tensions of human and technological, traditional and modern values – not to mention ideologies – are neither interrogated nor historically contextualized. Rather, they are neutralized in the service of complacency and submission – the sacrifice of the individual for the larger whole and, simultaneously, the immersion of the entire nation in the heroic story of the submarine.[29] The subversive force of Visconti's Ossessione (1943) truly stands out when juxtaposed with such films. Ossessione sublimates no tensions, and evidently swerved too sharply from the heroic mode, dwelling instead on outcasts reconciled neither to the community nor to the regional landscape that itself persists in refusing their accommodation. Despite the hope that, given his passion for American culture and an unprovincial cinema, Vittorio Mussolini would let Ossessione pass as he did the script proposal, the Duce's son stormed out of the screening room proclaiming that 'This is not Italy!' This reaction heralded the mutilation of Visconti's first feature. The image of the landscape was to evidence the land's plenty, the community's health, modernity's assimilation in a harmonious unified vision of progress, and thereby the regime's economic and social successes.

Documentary forms invite pronounced use of the regional landscape, eliciting possible explorations, as Antonioni intimates in his article, of alternatives to sentimental and heroic rhetoric. The looser generic codes and conventions in the short-format documentary might have allowed for the explorative, modernist aesthetic that Antonioni promotes, even as a propagandistic imperative persists throughout this period. Films on Italian cities and towns, historical and contemporary sites, as well as documentaries devoted to the modernization of the rural countryside – the drying of swamps, the building of new provincial towns, the construction of dams, and other developments in industry and technology – abounded in the 1930s and must have attracted Antonioni's interest. In 1933 Raffaello Matarazzo directed several documentaries on grand Fascist projects: Littoria and Sabaudia focus on the new towns, Mussolinia di Sardegna on the building of a dam. Heightened formal, even geometrical compositions – rhythmic patterns of fields, canals, tracks, bricks, shovels, workers, often flattened in distinctly modernist high-angle shots – matched by the absence of voice-over commentary, make salient a quasi-abstract musical orchestration of engulfing development and heroic progress. Such strategies are familiar from Soviet and other European avant-gardes, as well as the poetic documentary of the 1920s and '30s – perhaps brought to attention in Italy by Corrado D'Errico's Stramilano (1929), the Italian example

of the city symphony on the eve of sound. As with *Aeropittura*, the adaptation of earlier avant-gardes was perhaps a way to assimilate no longer subversive modernist forms to the current inclinations of the regime. What might have held revolutionary force in the teens and twenties – the raising of modernity to consciousness and its dynamization in modernist form – is echoed but diffused here in absorbing, satisfying rhythms that celebrate Fascist heroic unity and progress: the possession of the landscape, the mastery of space that leaves no room for question or doubt, for the interrogation of altered historical conditions, for the contingency of a changing, fragmented environment.

The Venetian poetic documentaries of Franceso Pasinetti appear free, in the first instance, from the burden of propaganda but are in fact strikingly lacking in any allusion to historical context, contemporaneity, and human consequence in the midst of the war when they were produced. Venezia Minore (1941) and I Piccioni di Venezia (1942) manifest Pasinetti's eye for the aesthetic promise of everyday gestures, the minor detail, the neglected corner that crystallizes a spirit of place. Unraveled in often surprising camera or object movements, or the deliberate patterning of background and foreground elements brought into new relations, these are not unrelated to Antonioni's vision in his article on the Po. However, Pasinetti's hermetic, *Calligraphic*[30] bent is perhaps just what Antonioni rejects as the 'decorative' pitfalls of cinematic landscapes divorced from modernity, change, and thereby from a sense of historical process. If a formalist engagement comparable to Pasinetti's characterizes to some extent the photographic illustrations of the Po river article, we have noted the startling sense of the changing conditions of the environment, as well as of the means of perceiving it, surface in the last page. In disclosing the problematic connotations of a utopic, universalizing modernism under late Fascism, the aerial image departed, we have seen, from sheer formal pictorialism – perhaps also by virtue of its position and its participation in the movement and temporality of the photographic sequence as such.

One finds little in the fiction and documentary film production of the period that correlates to such an oscillating position as Antonioni's article suggests. Curiously, it is in the midst of newsreel journals produced, ostensibly, in direct service of the regime, that one traces scattered echoes of such a consciousness. The journals produced by the Istituto LUCE in this period often celebrate Fascism's technological accomplishments in the spaces of daily life: in regional, rural, or urban, industrial, military, and colonial landscapes in transition. While produced in government service under a propagandistic imperative, it is perhaps their hastier production circumstances – as well as the application of looser chronicle structure – that allowed at times for tentative, explorative forms to surface. In journals produced by the Institute's East African arm, the movie camera's proclivity for aviation accomplishments and

other military feats as vivid visual material is harnessed, certainly, to the promotion of virile imperialist ambitions. But this rethoric is modified in some instances that, alternately, dwell on the anti-dramatic, mundane, repetitive elements of military life and action in surprisingly digressive chronicle form by depicting the labor, the mechanics, and the everyday chores surrounding the maintenance of forces, the marginal phenomena contingent to their practices and feats. These contextualize and modify the sheer force effected by the sweeping aerial shots of desert landscapes, the large movements of troops, the spectacular fall and explosion of bombs. In the midst of all this, small spaces of hesitation *vis-à-vis* visual evidence open up in such LUCE journals as *La battaglia dell'amba Aradam* (1936), or *Conquista della Somalia inglese* (1940), in place of the totalizing form and graphic technological and rhetorical sweep of the vast majority of documentary production of the period. And in these spaces occasionally made salient by the withdrawal of heroic music and commentary, different relations emerge in the contingent detail of this warfare in a foreign land whose conditions are so patently at odds with the imperialist war machine. These occasional glimpses, implicitly dissonant with the reigning ideology that sponsored the journals' production, suggest an interrogative outlook that stands out against the more contained fiction and documentary cinema of the period. While it is hard to assess just how deliberate these scattered instances might be, it is quite possible that Antonioni would identify the modernist possibilities of the chronicle form wherein the contingent, the minor, the dissonant trace persists against the gripping embrace of Fascist instrumental filmmaking.

There is a way in which, matched by such scattered instances in the LUCE film journals, Antonioni's photographic sequence with its aerial conclusion constitutes a lesson on the possibility of a Neorealist documentary in open chronicle form by which to sort out what remains of cinematic modernism after the war. How to convert this lesson to a new order of film production, free of heroism and sentimental ornamentation, of the imposition and closure of both traditional narrative and propagandistic documentary devices? How to maintain an oscillation between the modern promise of the cinematic image with its now-tainted rational order, and the residual, contingent spaces of the regional landscape without quite subjugating or containing them? These would be the kind of questions that a post-Fascist cinema would need to confront in working through cinematic modernism *vis-à-vis* a changing, discordant, depleted landscape – as the Po valley itself was to become in a few short years. Looking at the way in which the queries of his pre-war article survive in his film practice, one might consider that Antonioni was willing to risk the linking of pre- and post-war Italian modernisms for all its discomforts.

An Altered Terrain

Antonioni's essay was written four years prior to initial production and eight years prior to completion of his first documentary. In the course of this period, which included the war, the lesson of the Po river article was to be developed and refined. For while Antonioni's filmic images of the Po will on some level be strikingly reminiscent of the 1939 photographic illustrations, their new cinematic syntax, editing, and temporality offer important departures from that early exposé. In the winter of 1942-43, across the riverbank from where Visconti was working on Ossessione, far from centers of power, from the monumental and mythic connotations of Rome and the south, and from the softer contours of Tuscany that make up the ideal image of Italy in the touristic imagination, Antonioni shot Gente del Po (People of the Po). The fate of this documentary – the negatives of which were stored in Venice during the particularly violent period following its shoot – could not be reversed, as was Ossessione's upon its restoration. In 1947 – a year after Roberto Rossellini explored this same landscape in the final episode of his Paisà[31] – Antonioni could only put together the remains of the footage towards some ten minutes of stirring filmmaking, about half of the projected length. Whether the lost footage – largely shots of the flooding in the Po delta – was deliberately destroyed under the puppet Republic of Salò or simply perished by neglect in humid conditions comparable to those depicted in the rushes themselves remains unclear. Either way a confluence of circumstances – the difficult conditions and interrupted history of the production, the violent shifts in political climate and prolonged struggle in the north of Italy from 1943 through the end of the war – have all left their scars on Antonioni's first film. Perhaps the loss both of footage and of pre-war illusions that marks this production was *itself* important. These marks of loss and fragmentation now altered the way in which Antonioni's Neorealist modernism might be achieved. No longer comfortable, perhaps, with the controlling, unifying dimension of aerial perception implicitly promoted by the Po river essay, a principle of contingency now emerges to the fore, inflecting tensions of identification and alienation, referentiality and abstraction, realism and modernism in ways that modify the issues I have been discussing.

Between quotidian detail and a movement of emptying-out of the landscape, less-than-episodes, fragments of river life, unpursued plot clues traverse, as it were, the documentary body of Gente del Po. These narrative elements are suspended, time and again, in descriptive passages or altogether inert compositions that refuse to lend themselves to classical representational containment. Though the voice-over points out potential Neorealist story ele-

Figure 7
Fig. 7-10 Michelangelo Antonioni's *Gente del Po* (1942-47): frame enlargements

Figure 8

ments – 'a man, a woman, a child' – these are allowed no development or resolution, their dramatic or sentimental potential is blocked, *dissolved* in the image of the river itself: in shots of barge movement and the water expanses filling the frame. Following this fragmentary exposition, in the briefest visual account over which verbal commentary is suspended, other elements surface but hardly serve to organize the plot except insofar as they suggest a subtle interplay of foreground and background, surface and depth elements in the mise-en-scène: a sick child lies in bed in the belly of the barge, the parents' movements make salient the different levels and planes, the distribution of light in this domesticated interior space moves through the river, just under the surface daylit world of machinery and routine labor and actions scanned by Antonioni's camera.[32]

Other narrative fragments intersect such early threads as described above only to be suspended again in stark, inert compositions. A bicycle rider crosses the frame. We might have noticed him earlier as part of the background of the riverside town. The commentary now calls our attention to his presence as he crosses the barge-woman's path to the pharmacy and rides up and over the levee. Then, for the duration of a single startling shot, the bicycle rider pulses with narrative possibility, summoned from the documentary order of the film; for a few seconds he is a figure sharply drawn, only to be withdrawn again as the ground re-emerges to the fore. A girl is sitting on the bank looking at the river, her back to the camera in medium shot; the bicycle enters the frame and is placed in-between girl and camera. Several planes – river, bank, girl, bike – all compete for space in this dense and suddenly dramatic framing as the rider now settles down, partly concealing the girl as she turns to cast an unfathomable look upon him. His sports-shirt with the logo 'DEI' – a contemporary, solid make of bicycles – looms large on the screen, its flat modern graphics a striking intrusion upon what one had envisioned as a romantic moment in the timeless embrace of the river. Then the camera pans away to the empty expanse of bank, river, opaque sky beyond – suspended landscape elements, signifying nothing in particular, opening, emptying up the little narrative all in the duration of a single shot (fig. 7-8). The narration is thus in constant withdrawal under an emerging principle of dissolution, recession, and abstraction that inflects this short documentary at every level. From narrative promise to the graphic inscription of the sports shirt that blocks preceding connotations and from the intrusive pause over the upright graphics to the opaque landscape that even refuses the consolation of a receding distance, we witness what is surely the earliest and paradigmatic instance of Antonioni's cinematic modernism.

In its look upon the regional, Neorealist subject matter, Gente del Po maps a space of oscillating, fractured textuality and visuality that approaches a mod-

Figure 9

Figure 10

ernist perception on all things private and public, quite distinct from Antonioni's cinema as it will become more persistently recognizable in the years to come. The film's realist claims – the regional elements of everyday life that it documents – are repeatedly suspended, like its narrative, in motions of externalization and dissolution, amplifying the identification of the landscape with the space of cinematic representation as such. The gray expanse of the river – 'flat as asphalt,' the voice-over observes – that fills the frame repeatedly, opaquely; the graphic division of light and shade on a wall under the opening credits; the Metaphysical premonition of the empty provincial piazza bordered by arcades whose perspectival suggestion is blotted by the bright light and sharp contrasts; the high-angle shots of the barge filling the frame bottom to top, with depth and the view itself effaced by smoke as the camera tilts up (fig. 9-10) – these turn attention to the grasp of the landscape *as* cinematic image in process of being drained. These are not Neorealism's consoling, reconstructive gestures. The linear movement of the river towards the Adriatic and the final view of the marine horizon themselves seem fashioned as cinematographic entities to correspond to the modernist sensibility confronting them, reciprocating this movement of dissolution, emptying-out. Like the aerial photograph of Antonioni's early essay that emptied the landscape of traditional connotations and narrative anecdote, so in the closing images of Gente del Po the landscape, like the film itself, is vacated. Yet the profilmic is not subjugated here to an encompassing figure except under the sign of mutability, change: the tentative voice of a modernist cinematic consciousness exploring the spaces that open up in-between realist codes and the contingency of the everyday.[33]

In describing this particular position *vis-à-vis* Neorealist cinema, we might now recall that of all the major filmmakers to emerge in this period leading to the great flowering of Italy's post-war film culture, Antonioni is the only one to dwell so rigorously on the documentary. Rather than simply appealing to quasi-documentary means of articulation (actual locations, non-professional actors, etc.) *in the service of* Neorealist narrative or historical reconstruction, we see him preoccupied with distilling cinematic form from the profilmic subject at hand. It may be that a documentary consciousness sharpened his sense of taking nothing for granted, taking nothing as settled and coded, realist or otherwise, in the face of post-war contingency that was so amplified by the sharp shifts in power and ideology, the disappearance of people, and the transformation of the landscape itself over the course of the war. The post-war Neorealist agenda – harnessed as it was to the urgent restoration and reconstruction of Italy's image to itself – would avoid, at least for a while, a rigorous exploration of cinematic modes that would disrupt its consoling sense of humanist certainty and continuity, avoiding a full-fledged confrontation with a modernist consciousness as well as with the documentary form as such. Antonioni, in-

stead, succeeded in casting his Neorealism in modernist terms via a documentary confrontation with fundamental questions of cinematic representation and in light of the lessons of aesthetics and politics under Fascism. The uncertain terrain that he had begun to explore so early perhaps could not be quite accommodated in a film culture that identified its project of post-war commemoration and reconstruction with narrative consolation, and could not always afford to be interrogatory or reflective. Thus, at the height of Neorealism and through the end of the 1940s, Antonioni remained occupied with documentary production on the margins of Neorealist cinematic practices. While his documentary choices invite some comparisons with the work of Visconti and Rossellini, Antonioni's concerns, bound up with a pre-war modernist promise that could not be taken to its conclusions during Fascism, had to wait before they resurfaced in radical form in 1950 in feature film production. The oscillation between cinematic registers we have noted in Gente del Po was already synonymous with an ambivalent perception of late modernity in the wake of the World War. The forms of contingency responsive to a lacunary landscape wherein some of modernity's most solid edifices have been destabilized; the shifts between a realist representational order and the dissolution of its secure devices; the discovery of abstraction at the heart of the figure and the figurative potential of the void – these persist as defining features of Antonioni's later cinema.[34]

Antonioni's grasp of the landscape as a distanced, alienated terrain recurs as a critical, transformative principle much wider in its potential than the aerial view we have located as a paradigm. The view from the iron bridge in Cronaca di un Amore (1950) and from the tower of Il grido (1957) were already striking instances, L'avventura's island views came to be the most celebrated, and the EUR finale of L'eclisse perhaps the most radical of Antonioni's elaboration on this mode of seeing. The island where a character has disappeared without a trace, the deserted towns and vacant hotel corridors, the crossroads in the EUR Roman suburb to which the camera, but not the protagonists, returns – these crystallize an 'intelligence' of place stripped of 'extraneous and decorative elements' of coded rhetorical devices that would mediate human presence and pastness. The analytic clarity of such filmmaking, like Antonioni's writing of the period, exceeds that of the Po river essay, but he clearly drew from concerns already in place in that early, illustrated article.[35] The filmed location is neither a landscape painting nor a still photograph. Antonioni's repeated movements of crystallization through the palpable elimination of narrative and dramatic figures and codes draw on a documentarist's sense of the unfolding of the profilmic place in the duration of a shot, the unraveling of relationships in time and space consciously differentiated from the suggestion of cause and effect and the persistence of narrative

and expository remnants.[36] The crystallizing of a sense of place – a regional specificity that still carries realist values – is bound up with its apparent opposite: the withdrawal of definite figuration, and a fragmented modernist interrogation of the conditions of representation, often accomplished through the syntactic, temporal modality of cinema. Antonioni's work was, from the start, thus based in a fracturing of the figure so as to test the ground and see how ground emerges *as* figure, capturing the movement by which one evolves into the other, dwelling on the narrative digressions and the indexical disturbances that arise in this process.[37]

I have traced the nascent forms of these ideas in Antonioni's early photographic essay and the documentary devoted to the river Po. It takes astonishing form in one of his latest works. The eight-minute short Noto Mandorli Vulcano Stromboli Carnevale (1992) may serve to sum up this brief genealogy, making salient the trajectory of Antonioni's modernism from the heritage of the avant-garde and its 1930s assimilations, via Neorealism, and through late-modern recall. Produced by ENEL (Italy's national electric company) in 70mm color stock for the Italian pavilion at the Seville Expo, the 1992 experimental documentary incorporates extensive aerial cinematography of extraordinary resolution in the last three of its five Sicilian landscape vignettes. Antonioni returns here to L'avventura's locations in Noto's elevated bell tower, going on to invoke such late Neorealist locations as Rossellini's Stromboli, Terra di Dio (1951) and even Fellini's crowded piazzas in the closing images of Carnevale. The aerial views still have the power to transform our sense of orientation, dimension, depth: the mouths of volcanos, the precipices and folds of earth that appear in one instance as small dunes in tight framing are revealed in the next as voluminous mountainous expanses (fig. 11). The iridescent sulphuric cracks, vast or minuscule (it is often unclear which) emit fumes that at times envelope the frame entirely (fig. 12). Whatever film-historical or regional connotations are at work here, they are transfigured by aerial cinematography in smooth gliding motions heightened by the synthesized music. The celebrated, named Sicilian landscape features seem to be seen through the eyes of one separated from the earth, perhaps the survivor of an unseen but yet sensed cataclysm. The terrain is presented from *outside* itself. Or should one simply say that its alien aspect is predicated on the superb technology turned upon it? As moving image, the fuming earth seems to heave and pulsate like a corporeal presence, an immanence waiting to unfold. The empty and the full, the deserted and the populated views, the primeval and the devastated become strangely alike in this short film: they are thus raised to a new figural order. In the wake of the Cold War, on the margins of Europe, do these images speak of an exhaustion of resources at the end of history, or some

new-age transformation of consciousness *vis-à-vis* a still living, breathing earth?

In the half century that separates Antonioni's early photographic essay and first documentary from these late Sicilian landscapes, the re-casting of the relation between modernity (or late modernity) and its conditions of representation in motion pictures has not been resolved. But its attendant anxieties have perhaps been augmented by a still altering environment, as well as by the progress of image technologies – the transfiguration of the very notion of reference and reproduction, photographic and actual. A fundamental ambivalence about this relationship is still at work in the most eloquent instances of fiction and documentary, in cinematographic, digital, and virtual spaces. Antonioni located his first arena for such an interrogation in his native landscape, bringing into play there the profound tensions of Italian culture between the world wars. But it was following the camera's recording of hitherto unseen atrocities, following the panorama of European and other landscapes leveled by more than just a camera's vertical outlook, that one came to realize how altered must be the look upon the terrain, brought in all its devastation to its surviving beholders.

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Fig. 11-12 Michelangelo Antonioni's *Noto Mandorli Vulcano Stromboli Carnevale* (1992): frame enlargements

Notes

1. 'Per un film sul fiume Po,' *Cinema* 68, 25 April, 1939, pp. 254-57. I offer in the citations that follow my own translations from this text. However, I have also borrowed from David Overbey's translation, 'Concerning a Film about the River Po,' *Springtime in Italy: A Reader on Neo-Realism*, ed. and trans. David Overbey (Hamden, Conn.: Archon Books, 1979), pp. 79-82.
2. The juxtaposition of 'commercial need' and 'intelligence' is not original, of course, and could have been raised by diverse ideological fronts. Speaking for a more rigorous political cinema, and privileging documentary over traditional fiction, Futurist photographer, film critic and theater director Anton Giulio Bragaglia, in a 1931 contribution to Gentile's *Educazione fascista*, cites from René Clair a warning that in the 'battle between capital and intelligence ... intelligence would inevitably lose out.' Cited by Victoria de Grazia in *The Culture of Consent: Mass Organization of Leisure in Fascist Italy* (Cambridge: Cambridge University Press, 1981), p. 220.
3. The 'interstice' is Roland Barthes's key term in his letter of appreciation to Antonioni, published by the *Cahiers du Cinéma* in 1980. English translation in Geoffrey Nowell-Smith, *L'avventura* (London: BFI, 1997), pp. 63-68.
4. One is tempted to ascribe the Po river photographs to Antonioni himself: though uncredited, they are close to his taste and his eye as we have come to know it from his subsequent work. They were, at the very least, surely selected and approved by Antonioni. I dwell on the provenance of the last photograph below.
5. This screening device that reorganizes and flattens the image is comparable to the fashion shoot compositions in Blow-Up (1966) whose concern is, again, still photography.
6. 'Photogrammetry' is that branch of aerial photography that serves cartography. The term 'instrumental' I borrow from Allan Sekula, who uses it to discuss the aesthetic-ideological bind that informs the relation between the realist, scientific, primarily military applications of aerial photography, its aesthetic appreciators, and its progeny; see 'The Instrumental Image: Steichen at War,' *Artforum* (December 1975), pp. 26-35.
7. See *Vues d'en haut: La photographie aérienne pendant la guerre de 1914-1918* (Paris: Musée de l'Armée; Nanterre: Musée d'Histoire Contemporaine, 1988).
8. Among the numerous examples it may suffice to cite Robert Delaunay's 1922 painting of the Eiffel Tower modeled on a 1909 balloon photograph, which Le Corbusier used for the cover of his book *Decorative Art Today* (1925). See Beaumont Newhall, *Airborne Camera: The World from the Air and Outer Space* (New York, Hastings House, 1969), pp. 104-5, for juxtaposition of these images. In the Soviet Union Alexander Rodchenko, El Lissitzky, and Kasimir Malevich pursued new spatial explorations in painting, sculpture, and photography explicitly informed by the altered views of the airborne camera. Aaron Scharf summarizes these trends in *Art and Photography* (1968; London: Penguin, 1986), pp. 294-97. The vertical city views taken from Berlin's radio tower by Lászlò Moholy-Nagy suggest the continuity between the conditions of aerial photography and the modernist possibilities of extreme high-angle composition generally.

9. This outlook we may associate with the 'optical unconscious' described by Walter Banjamin as the promise of photography, its capturing of phenomena and sets of fundamental relations present upon the surface of the visual world but hitherto unavailable to ordinary perception. See 'The Work of Art in the Age of Mechanical Reproduction,' *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken, 1969), pp. 235-37.
10. In his *Theory of Film: The Redemption of Physical Reality* (New York: Oxford University Press, 1960) pp. 13-18, Siegfried Kracauer sees amplified in the aerial view a 'precarious balance' between what he calls the 'realist' and the 'formative' affinities of the photograph. In the photography essay of 1927 Kracauer implied however that the formal possibilities of the photograph, emblematized in the aerial view's 'reduction' or abstraction of its objects, are inseparable from its privileged access to modern reality. The ambivalence of the photograph is transposed here to another order, which enables the tensions of surface and depth, alienation and identification, abstraction and documentary referentiality to inform modern consciousness regarding the material basis of phenomena. See Siegfried Kracauer, 'Photography,' *The Mass Ornament: Weimar Essays*, trans. and ed. Thomas Y. Levin (Cambridge, Mass.: Harvard University Press, 1995), pp. 61-63.
11. See previous footnote. This emblem of modernity Kracauer draws from mass gymnastics, military parades, and music hall shows whereby the spectacle, typically seen from a distance, offers a larger surface pattern to emerge in another dimension from that of its parts. The Mass Ornament is consistent with aerial photography's grasp of the landscape as an abstract optical surface. Taken as a finite, mythified unity that obscures the concrete observation of things, the Mass Ornament embodies a Fascist outlook. 'As linear as it may be, there is no line that extends from the small sections of the mass to the entire figure. The ornament resembles *aerial photographs* of landscapes and cities in that it does not emerge out of the interior of the given conditions, but rather appears above them' (Kracauer, 'The Mass Ornament,' in *The Mass Ornament*, pp. 76-77; italics in the original). But Kracauer also suggests that, worked through to its conclusion the ornament may be seen, conversely, to represent to consciousness its fundamental conditions in modernity, towards progressive ends.
12. Originally in Vittorio Mussolini, *Voli sulle Ambe* (Florence, It.: Sansoni, 1937). English translation of this passage is in A.J. Barker, *The Civilizing Mission: A History of the Italo-Ethiopian War of 1935-36* (New York: Dial Press, 1968), p. 234. Sekula cites this passage as part of his eloquent analysis of the conflation of the aesthetic pleasures of aerial photography and its militarist, aggressive substance. A more recent example of the haunting power of aerial photography to dissociate such visual phenomena from their most urgent human meaning was brought home to CNN viewers who, in the first days of the Gulf War, could witness how a vehicle approaching a bridge comes under the direct line of bombardment by the very aircraft from which the images were taken. As the line of fire and the camera's view coincide one realizes that this 'hit,' so familiar from video-games, involves not abstracted visual pleasure of technological mastery but the direct deathly consequence of military aggression. The only reason it can be seen time and again on television is due to the distant, alienating perspective that empties the view of any

anthopomorphic identification, abstracting it as a chillingly spectacular tool of propaganda.

13. This was still on the pages of *Corriere padano*, October 26, 1938 and December 10, 1938. Sam Rohdie translates segments from these reviews in *Antonioni* (London: BFI, 1990), p. 30. In fact, Alessandrini's film was conceived by another fighter pilot who turned to cinema, the aerophotographer Filippo Masoero, whom I discuss below.
14. In retrospect we might associate the rising smoke in two points in the last photograph not with factory chimneys but smoke bombs used in training.
15. Walter Benjamin famously cites Marinetti's 1936 manifesto celebrating 'the fiery orchids of machine guns' in war's aesthetic forging of a 'new architecture, like that of the big tanks, the geometrical formation flights, the smoke spirals from burning villages.' See the 'Epilogue' and last footnote to 'The Work of Art' essay, p. 241, p. 251.
16. This summary is based on Gian Piero Brunetta's account of the *Cinema* group in his *Storia del cinema italiano,* vol. 2: *Il cinema del regime 1929-1945* (Rome: Editori Riuniti, rev. ed. 1993), pp. 220-30.
17. See, for example, Ennio Flaiano, 'Le ispirazioni sbagliate,' *Cinema* 61 (January 10, 1939), pp. 10-11, where Flaiano valorizes the neglected, minor corners of Italy over stereotypical views of monuments. Domenico Purificato, in 'L'obiettivo nomade,' *Cinema* 78 (September 25, 1939), p. 196, promotes an explorative *plein air* cinema, attentive to minor, forgotten (albeit picturesque) corners – regional topographies, indigenous cultures, vernacular architecture. The introduction to my dissertation, 'The Earth Figured: An Exploration of Landscapes in Italian Cinema' (New York University, 1995) dwells on these and related texts from the period devoted to the promotion of location shooting.
18. *Strapaese* ('ultra-country') and *stracittà* ('ultra-city') coexisted as Fascist themes. The former's regionalist cult posited itself as the pure Italian alternative to technology and the internationalist modern culture of the city, which it understood as un-Italian and thereby un-Fascist. This regionalist cult was to be expected in view of the rapid industrialization of Italy and the first full experience of modernity in the twenties and thirties. James Hay describes the documentary and fiction films of the 1930s devoted to the myths of *stracittà* and *strapaese* in *Popular Film Culture in Fascist Italy: The Passing of the Rex* (Bloomington: Indiana University Press, 1987).
19. Ruth Ben-Ghiat offers a lucid summary of this subtle cultural policy in the Introduction to her *Fascist Modernities: Italy, 1922-1945* (Berkeley: University of California Press, 2001), pp. 1-15.
20. EUR's residential neighborhoods constitute one of the two main locations of Antonioni's L'ECLISSE (1962). But perhaps Giuseppe Terragni's Casa del Fascio in the northern lake-town of Como exemplifies best the ways in which an official Fascist building – beyond the imperial center of Rome however – could incorporate Classical allusions to satisfy a Fascist vision of empire in a Rationalist design, incorporating as well Mediterranean-vernacular, even rural elements. See Richard A. Etlin, *Modernism in Italian Architecture, 1890-1940* (Cambridge, Mass.: MIT Press, 1991), pp., 439-79.
21. My main sources on *Aeropittura* are Enrico Crispolti, *Il mito della macchina e altri temi del futurismo* (Rome, Italy: Celebes, 1969); Crispolti, *Aeropittura futurista*

aeropittori (Modena, Italy: Galleria Fonte D'Abisso Edizioni, 1985); Crispolti, 'Second Futurism,' *Italian Art in the 20th Century: Painting and Sculpture 1900-1988*, ed. Emily Braun (Munich: Prestel Verlag, 1989), pp. 165-71; Franco Passoni, *Aeropittura futurista* (Milano, Italy: Collezione 'Le presenze' della Galleria Blu, 1970).

22. This is the editorial opinion of Giovanni Lista in 'La création photographique futuriste' in the catalogue *Photographie Futuriste Italienne 1911-1939* (Paris: Musée d'Art Moderne de la Ville de Paris, 1981), pp. 5-22.
23. The transparent surfaces of another aero-painting – Mario Molinari's 'Futurist Mediterranean' in his 1938 *Gulf of Hammamet: Topographical Lyricism* – would also be exemplary here.
24. Cristpolti, 'Second Futurism,' 168-69, cites Marinetti's claim of 'five hundred Italian *aeropittori*' in his 1934 presentation at the Venice Biennale. Among them Crispolti counts the Ligurian ceramist Tullio D'Albisola, who trained Lucio Fontana and, at the other end of Italy, the Sicilian Futurist Pippo Rizzo who was an influence on the young Renato Guttuso.
25. The manifesto, dated April 11, 1930, was published on the first page of a special issue of *Il Futurismo*, January 11, 1931. It was signed by Marinetti and the *aero*-painter and photographer Tato, pseudonym of Guglielmo Sansoni.
26. Lista summarizes his career in *Photographie Futuriste Italienne*, pp. 74-75.
27. Giovanni Lista, *Futurism & Photography* (London: Merrell, 2001), p. 145.
28. The film appeals for its pictorial *mise-en-scène* to a range of traditional realisms – reminiscent of Visconti's sources some years later – from Caravaggesque interiors in peasant kitchens to the nineteenth-century *Macchiaioli* for its central-Italian rural outdoors. Blasetti's leisurely pictorialism is no longer possible during the war, but a seamless incorporation of modernity and sentimental traditional realist elements continues to be perpetuated.
29. Brunetta, p. 151, emphasizes this 'anthropocentrism' of the film, reporting as well that, perhaps for its humble 'anti-rhetorical' style, it was not well received by the Fascist press.
30. While *Calligraphism*, which flowered in the early 1940s, often attended to regional land- and cityscapes, Neorealism will eventually come to define itself against its hermetic reflexivity and retreat from contemporaneity in an ornamental engagement with literary adaptation and historical themes. A prime example of *Calligraphism* is Luigi Chiarini's *Via delle cinque lune* (1942), with the collaboration of Pasinetti and Umberto Barbaro, as well as Visconti's editor Mario Serandrei.
31. Geoffrey Nowell-Smith dwells on this return to the Po valley by those who will become the most significant post-war Italian filmmakers in 'Away from the Po Valley Blues,' *PIX* 1 (Winter 1993-94), pp. 24-30.
32. Perhaps not coincidentally elements of this film, including high angle, even perpendicular shots of the barge passing are strongly reminiscent of the interplay of surfaces and movements, above and below deck, in Jean Vigo's L'Atalante (1934).
33. My use of of the term 'contingency' in this essay is influenced by T.J. Clark's discussion in *Farewell to an Idea: Episodes from a History of Modernism* (New Haven, CT: Yale University Press, 1999), pp. 7-11. Clark suggests that Fascism's appeal lay in

the promise of immanence that it offered as a solution to the difficulty of modernity's contingency.

34. One is tempted to read some of these ideas in light of what Gilles Deleuze will come to theorize as the post-war 'time-image.' But it is the grounding of such an image in the landscape that concerns me in this essay.

35. It is revealing that in this peak period surrounding L'ECLISSE Antonioni recalled the formative era between the Po river article and the production of GENTE DEL PO. In a key essay, 'The Event and the Image,' he articulates the fundamentals of his aesthetic in light of a landscape image, drawn from his 1942 stay in Nice. He describes a long 'establishing' view of a beach evocative of his images of the Po river: wide expanses of water, an opaque sky, scattered figures defined against an emptiness. This is followed by a narrative fragment based on a narrowing down of the view to particulars of action and reaction surrounding the discovery of a corpse in the water. Antonioni then envisions a film that would remove events from the scene, condensing its impact instead in a suspended image of place, at once empty of action and full of potential, the force of unfolding anxiety by comparison to which dramatic exchanges are superfluous. This essay's vivid *ekphrasis* corresponds to the Po river essay's photographic illustrations, echoing its appeal to an 'intelligence' of place on film, responsive to the tensions of a historical moment, thus spatialized. 'Il fatto e l'immagine' was first published in *Cinema nuovo* 164, (July 1963); see the translation in Michelangelo Antonioni, *The Architecture of Vision: Writings and Interviews on Cinema*, ed. Carlo di Carlo and Georgio Tinazzi, American edition by Marga Cottino-Jones (New York: Marsilio, 1996), pp. 51-53.

36. In one peculiar instance, a documentary production based in a revisitation to the locations of an earlier fiction film performs a second-level fracturing operation: the *Ritorno a Lisca Bianca* (1983) traces in color the camera positions of L'AVVENTURA in the island location, not so much to continue the search for a lost character, but to envision the earlier feature film's production as *itself* an event now sunk into the landscape.

37. Antonioni's other documentary of a great river, the Ganges, in KUMBHA MELA (1989) is structured along extensive lateral traveling shots from a boat moving with the stream. Its pre-defined movement serves as a foil to the punctuation of gestures, bathing procedures, and chance expressions as the bathers – some emerging in their recurrence as proto-characters – pass through the frame. The use of the grand landscape figure of the river as correlative to the film's central mode of articulation – the traveling shot – amplifies duration, setting what persists or recurs *within* against what passes *outside* the field of vision as pertaining to the procedures of ritual and to its altered temporal order. In the last part of the film the camera enframes the gathering places on the riverbank, where the motions of ritual have ended, in near perpendicular high angle shots.

Dr. Strangelove

or: the Apparatus of Nuclear Warfare

William G. Simon

> Dr. Strangelove 'is the first break in the catatonic cold war trance that has so long held our country in its rigid grip. '
> Lewis Mumford[1]

> 'A dysfunctional war machine is inherently self-destructive.'
> Manuel de Landa[2]

Critics most frequently approach Stanley Kubrick's Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb (1964) as a comic satire about the conditions and potential consequences of the continuously escalating nuclear arms race between the United States and the USSR within the Cold War political assumptions of the early 1960s. Such approaches to the film emphasize its ironic and comically hyperbolic representations of military personnel, politicians, and technocrats as well as the Cold War nuclear age mindset that threatens to trigger a nuclear holocaust. Kubrick's famous explanation of the film's comic mode – that while attempting a straightforward adaptation of Peter George's serious liberal novel *Red Alert*, he was so struck by the absurdity of the situations he was depicting that satirical hyperbole suggested itself as the only way to do justice to the subject matter – is usually invoked as the key to the film's conception.[3]

Such a critical approach is unquestionably valid and productive. The film brilliantly caricatures the military and political role-players of the 1960s Cold War escalation through its Swiftian use of language and characterization. Ironic disparity between the modern technology of the nuclear apparatus and the anachronistic behavior of characters operating it – for example, cowhand Slim Pickens flying his deadly B-52 bedecked with a ten-gallon hat while giving orders in a folksy Western twang – frequently structures the satire. Grim comedy is derived from the discrepancy between the basic situation in the film (the threat of the annihilation of the human race through atomic warfare) and

the habituated and utterly inappropriate ways in which characters react to this reality. General Buck Turgidson, the principal culprit in this respect, protests that it's not fair to condemn the human reliability program just because one general has gone mad and triggered the atomic holocaust. Trying to justify a combat scenario in which ten-twenty million Americans would die, he famously admits, 'I'm not saying that we won't get our hair mussed.'

The mind-numbing jargon of Rand Corporation-like Think Tank technocrats – for instance, a manual entitled 'World Targets in Megadeaths' – is prominently displayed. Bomb-bearing aircraft flying to their targets are accompanied on the soundtrack by nineteenth century battle marches and the holocaust itself transpires to the tune of sentimental World War II-era love songs. The satire foregrounds a central theme: the gap between, on the one hand, deadly modern weaponry and its potentially calamitous consequences and on the other, the out-moded behavior patterns and technocratic doublespeak rationalization of human characters who are out of contact with the reality of their situations.

Without disputing the importance of appreciating the film's satirical method and thematic emphases, I would like to pursue an alternative approach to the film's project. I want to suggest that Kubrick and his collaborators had a further ambition in representing the condition of the nuclear arms race, an ambition best understood through several aspects of the film's narrative structuring. I want to propose that on the level of its narrative discourse, the film presents a critical analysis of the international nuclear apparatus or the machine of nuclear warfare.

The narrative structure of Dr. Strangelove is based on the frequent and dramatically pointed editing back and forth among only three spaces of action: exteriors and interiors at Burpelson Air Force Base, exteriors and interiors around Major Kong's airplane, and the War Room of the Pentagon. Only the opening credit sequence (the in-air refueling of a B-52), the closing sequence (repeated nuclear explosions), and one early scene set in General Turgidson's bedroom (to be discussed later) are exceptions to this limited but extraordinarily complexly orchestrated pattern. The editing among the three spaces and the actions performed within them should be understood as a representation not only of the interaction among the central components of the nuclear war machine but also finally as a dramatization of the breakdown of that war machine. The film's critical analysis resides in the narrative structure's dramatization of the failure of the machinic premise of the nuclear war apparatus.

To appreciate the film in these terms, we need to have an understanding of the international nuclear condition as an apparatus or machine of nuclear warfare. For such a formulation, I turn to the theory of warfare outlined in Manuel de Landa's extraordinary book *War in the Age of Intelligent Machines*. De Landa

presents his discussion as a theory, but I would emphasize that his interpretation is grounded in a very strong descriptive fidelity to the reality of existing military assumptions and structures as they existed from the advent of the nuclear arms race in the 1950s (and, for that matter, as they continue to exist today). I would also argue that de Landa's account conforms so strongly to Kubrick's representation of the nuclear war apparatus and that Dr. Strangelove could be viewed as the film of de Landa's book had the book not appeared more than twenty-five years after the film, almost as if to belatedly explicate the film. Like de Landa, Kubrick was committed to scrupulously accurate depiction of the technology of early-1960s bombs, missiles and airplanes as well as communication systems and the military chain of command. He researched voraciously, consulted with notable experts, and according to Lo Brutto's biography, in regard to one detail for which Kubrick and art director Ken Adam could not find documentation (because it was classified), they came so close in guessing the dynamics of the CRM114 failsafe device that Air Force personnel 'went white' upon seeing their imagined version of the mechanism.[4] In short, while the design of the War Room may be an invention, the design of the airplanes, bombs, missiles, and the depiction of command and communication systems and training manuals were based as closely as possible on research into existing conditions – the same conditions which de Landa researched, described, and interpreted in his book.

In describing the dynamics of modern warfare, de Landa argues that its goal is to conform as much as possible to a machine paradigm, an assemblage or network that integrates human and machinic components into a 'coherent "higher level" machine.'[5] Such a machine is of a higher level because 'the integration of a collection of elements into an assemblage is more than the sum of its parts ... [it] displays global properties not possessed by its individual components."[6] Because its purpose is to operate as much as possible like a machine, human instrumentality is to be minimized; while obviously humans are responsible for putting such machines in place, in terms of the operation of the apparatus, the humans' function should best be understood as a cog in a machine. Robotic intelligence is the ultimate goal.[7] The replacement of airplanes by guided missiles as delivery systems for bombs can be understood as a development in this direction because it reduces the human role in getting bombs to their targets. In recent wars, the increased use of computerization or artificial intelligence related to the targeting of bombs as in so-called 'smart' bombs or the use in Afghanistan of unmanned aircraft such as the Predator, which can perform surveillance and launch bombs, are further steps in the direction of the machinic paradigm.

In the early 1960s, the nuclear war machine depicted in Dr. Strangelove consisted of weapons, namely atomic and hydrogen bombs, mounted on mis-

siles and flown by airplanes. The airplanes are operated by humans (Major Kong and his crew) and are joined by communication systems (radio transmission linked to computers) to a command center (Burpelson Air Force Base) in which humans (General Jack D. Ripper) give orders for operation of the airplanes and deployment of bombs. Both the individual aircraft and the Burpelson level of command are assumed to be operating relatively automatically on the basis of standing orders. Burpelson is related by additional communications systems to a higher level of command (the War Room of the Pentagon in which, because of the developing emergency, are gathered high-ranking generals, the Joint Chiefs of Staff, technocratic advisors, cabinet members, and finally, the commander-in-chief, the President of the United States). Additional manifestations of the war machine in the film include radar, posed by de Landa as an information system for the detection of aircraft and functioning as a shield from attack and, most importantly and dramatically, a new and higher achievement of the nuclear apparatus, the Doomsday Machine, which is defined in the film as a series of nuclear bombs connected to a network of computers.[8] The Doomsday Machine is described by the Russian Ambassador in typical arms race double-talk as a deterrence to attack, which will trigger itself automatically and cannot be disarmed because its computer memory banks are programmed to recognize the kind of circumstances (e.g. enemy attack) that will detonate the bombs automatically. That is, the Doomsday Machine conforms to de Landa's designation of the ultimate aspiration of the machine paradigm: once it is put into place, it negates human intervention and achieves maximal automatization. As Dr. Strangelove himself admiringly declares, 'It rules out human meddling.'

On the basis of this account of the nuclear war machine and how it is represented in Dr. Strangelove, I shall elaborate how the three spaces of the film represent different components and functions of this apparatus. As suggested, Major Kong's airplane is the space of weapons and human agents who operate the airplane in order to deliver the weapons. Burpelson Air Force Base is the space of intermediate command. While its human agency is supposed to be restricted by standing orders, this assumption will be overridden. The War Room of the Pentagon is the space of the highest level of command. Its human agents constitute what de Landa designates as the institutional brain of the war machine although he describes one component of that brain, the Rand Corporation-like Think Tank warrior-technocrat (i.e. Dr. Strangelove in the film) as a mutation of that brain.[9] More on that later.

On the basis of the assumed function of each of the three spaces, it should be obvious that near the beginning of the film, the cooperation and cohesion among functions (which de Landa defines as essential to the effective functioning of the war machine) breaks down.[10] Quite quickly, the actions taking place

in the three spaces begin to operate at cross-purposes to each other and to the overall intended design of the apparatus. In de Landa's terms, friction, not cooperation and cohesion, become the operative mode.[11]

At Burpelson, in an act of right-wing fanatic madness, General Ripper issues a command to his flight squadrons, which is contrary to standing orders and national policy, namely to proceed to targets inside the Soviet Union and to bomb these targets, thereby initiating the nuclear holocaust. Inside Burpelson, Mandrake, once he has understood what Ripper has done, tries to do everything in his power to reverse the orders. In the War Room, once he is apprised of what Ripper has done, the President does everything he can to negate the effects of Ripper's command to the bomber squadrons. But in the B-52, Major Kong, having received his orders, exercises his extraordinary initiative against all odds to carry out his mission in complete contradiction to the desires and actions of all the other characters (except, of course, Ripper, who eliminates himself from the conundrum by committing suicide). The frequent editing back and forth among spaces of action heightens the large-scale irony of the conflicting trajectories of goals and actions by strongly juxtaposing the ever-escalating discrepancy and the opposing nature of intents and desires.

A productive way to formulate the dynamics of this cross-cutting structure in Dr. Strangelove is that it is based on a set of conflicts in focalization or narrative perspective in relation to the nuclear war apparatus.[12] The focalization structure can be explained in a number of ways.

One parameter of narrative focalization revolves around the relative knowledge that each of the characters in a story possesses in relation to the total story situation as well as the knowledge that the reader or spectator has in relation to the characters. In these terms, at the beginning of the film, only the madman Ripper knows the crucial story information that he has launched a nuclear attack. Mandrake and then the characters in the War Room fairly quickly catch up to his understanding of the situation and try to avert the attack. However, Major Kong remains fatally limited in his knowledge of the situation throughout the film. He does not know the circumstances under which Ripper issued his initial order, nor does he know that the President of the United States, as a matter of national policy, is attempting to countervene that order. The machinic assumptions under which Kong's plane is operating – to follow orders at all costs – complicated by the damage to his communication systems, created ironically by a failed missile attack attempting to end his mission, prevent him from knowing the desires and intentions of the other characters.

The spectator, because he is granted relatively equal access to all three spaces of action through the quickly alternating cross-cutting, is privileged to certain story information that the film characters do not know. For instance,

early in the film, we see Ripper issue his command several scenes before the other characters catch up to what he has done. Later after Burpelson Air Force Base has been attacked and Ripper has committed suicide, we follow Mandrake's frustrated efforts to transmit the three-letter recall code from the letters Ripper has scribbled on a pad while the characters in the War Room are going through all the permutations and combinations of the alphabet in order to discover the recall code. And, most dramatically, the spectator sees that Major Kong's plane has survived the missile attack and has subsequently changed targets while the War Room characters and the Russians assume he has been shot down. At the point when Russian Premier Kissoff is reported to be 'hopping mad,' we know why before the generals and politicians in the War Room do because we have been privileged to Kong's 'success' in continuing his mission. In the climactic scenes, the spectator follows Kong's efforts to fly his plane and its bombs to their target, thus triggering the atomic holocaust, while the War Room characters wait helplessly in suspense, not having any access to Kong's actions.

Thus, restricted knowledge on the part of one component of the nuclear apparatus in relation to the activities of other components is portrayed as a characteristic of the machinic paradigm that leads it to disaster. And the spectator, by being given quickly alternating views of all of the components, is able to observe and comprehend the developing catastrophic malfunction of the apparatus.

Another way to formulate the conflict of narrative perspectives in the film has to do with modes of visualizing and dramatizing actions. On the Big Board in the War Room, Kong's plane and its flight are represented by one of a series of dashes, tracing its trajectory to its target. Its progress through time is an abstract conceptualization and image of what Kong's plane is doing. Such an image corresponds to the concept of de-realization through which Paul Virilio characterizes modern warfare.[13] From the perspective of the institutional brain of the war machine, Kong's plane is nothing but a mark on a board, one abstracted cog in a machine.

The alternating scenes on Kong's plane present a radically alternative visualization and dramatization. It is considerably more concrete and dynamic. The spectator sees that there are human agents on the B-52 carrying out complex actions: averting missile attacks, putting out fires, calculating fuel loss, manually repairing malfunctioning bomb-bay doors. Most importantly, the resourceful fighting men switch targets because of their fuel loss, a factor not represented on the Big Board. The graphic display shows Kong's plane retreating while it is in fact flying on. That is, not only is the imaging system at the highest level of command abstracted and de-realized, it is wrong. Its information is restricted to a fatal degree. Frequent cross-cutting between the War

Room with its Big Board and Kong's plane demonstrates discrepancies in the operating premises of the machinic paradigm.

One final way to conceptualize the conflicts of narrative perspective in Dr. Strangelove has to do with what de Landa refers to as the institutional levels of warfare. These levels also conform to the machinic paradigm in their need to be co-operatively integrated.[14] De Landa delineates these four levels: 1) weapons and the hardware of war, 2) tactics in which men and weapons are integrated into formation for fighting single battles, 3) strategy in which the battles fought by these formations acquire a unified and coherent political goal, and 4) logistics, procurement and supply networks in which warfare is connected to the agricultural and industrial resources of a nation.[15] These industrial resources include information gathering and transmission/communications systems such as radar and radio command systems as well as computers.[16]

In these terms, the scenes on Kong's B-52 foreground the level of weapons and hardware; nuclear bombs mounted on missiles are flown to their targets by aircraft. One could even argue that the climactic moment in the Kong scenes – Kong bronco-riding a nuclear-armed missile to its target – privileges the literal point-of-view of the weapon.

Ripper's actions can be taken either as an instance of tactics, using men and weapons for winning a single battle divorced from political strategy, or as a perverse instance of strategy, since Ripper, in his right-wing Cold War anti-communist fanaticism, believes he is acting strategically. In either interpretation, he is acting contrary to national policy.

The War Room has a coherent political strategy – not to engage the Soviet Union in nuclear combat – and therefore attempts to negate Ripper's initiative. The actions emanating from the War Room constitute an effort to restore the principles of national strategy against Ripper's violation of it. Ripper speaks to this conflict of tactics and strategy when he reverses Clemenceau's dictum that war is too dangerous to be left to the generals. Instead, he argues, 'War is too important to be left to the politicians. They have neither the time, the training nor the inclination for strategic thinking.'

Logistics are not represented in the film through a specific space but rather, in the form of communications systems and computerization, as comprising a connective tissue, actually a largely malfunctioning one, among the other three levels of warfare. Considered in terms of the goal of necessary cohesion among all four levels, the institutional structure of the war machine is represented as malfunctioning. Its levels are not co-operating.

To sum up to this point, Kubrick's representation of the total apparatus of nuclear warfare centers on conflicts in narrative perspective that can be formulated along a number of lines. His narrative method of frequently and emphatically cutting among three spaces of action foregrounds the friction among the

components of this putative machine. Once one element of this assemblage of man and machine breaks down (in this case, the human element through Ripper's irrational initiative), all components of the apparatus begin to work against each other. The very premise of the machinic paradigm as applied to warfare is demonstrated to be fallacious. Human error may trigger the process, but the ultimate machinic nature of the apparatus in the form of the Doomsday Machine will complete the nuclear holocaust. Once the Go Code is issued in an act of human madness, nothing will stop the war machine from completing its mission. In de Landa's terms, the co-operation necessary for the interface of man and machine fails and friction rules.

There is one other narrative dynamic through which to formulate Kubrick's critical analysis of the nuclear apparatus as it is presented through the cross-cutting of the film's three spaces. This has to do with the film's very complex articulation of narrative time and it can be appreciated on two levels. On the one hand, the articulation of narrative time can be formulated as a representation of the centrality of timing to the operation of the nuclear apparatus. And on the other hand, the articulation of narrative time in the film has a great deal to do with the very complex ways that the film structures the spectator's experience in relation to the film's unfolding events. In this latter case, the issue has to do with the dynamics of narrative suspense.

To start with, de Landa suggests that clockwork timing of all components is essential for cohesion and co-operation within the machinic paradigm.[17] He further argues that at the point of friction or breakdown precision of timing, or the lack thereof, becomes an especially critical concern. The timeliness of receiving information, for instance, is essential to correcting malfunctions in the machine. De Landa states that '... it is not the absolute speed at which information travels across communications channels that matters in war, but its speed relative to unfolding events.'[18] Clearly, in Dr. Strangelove, once Kong's plane has been ordered to its target, the need for transmitting the recall code to it on time increases relative to the escalating crisis. In these terms, the film is structured on a series of increasingly urgent questions. Will the War Room staff transmit all the permutations and combinations of all possible three-letter codes until it hits on the right one to bring the planes back? Will Mandrake, who figures out the code, transmit it to the War Room on time – a process attenuated by the intervention of the very suspicious Colonel Bat Guano and by the failure of telephone systems? Having finally received the code from Mandrake, will the War Room get it to all the planes on time? From Kong's perspective, and at cross-purposes to Mandrake and the War Room, will he avert the missile attack (intended to end his flight) on time? Having averted the worst impact of that attack – but having had his communications system destroyed and his fuel tank damaged – will he be able to locate a new target? Having lo-

cated one, will he reach it on time? Having reached it, will he manage to open the jammed bomb-bay doors on time to complete his mission (and trigger the nuclear holocaust)?

This proliferation of increasingly urgent hermeneutic questions demonstrates the vital urgency of timing to the operation or in this case, correction of the nuclear apparatus. It also suggests that Dr. Strangelove is structured as a suspense film along the lines delineated by Roland Barthes in his account of the hermeneutic code.[19] Narrative questions are proposed and formulated, the answers to which are delayed or suspended by various strategies. The most important strategy in Dr. Strangelove is achieved through the frequent cross-cutting among the three spaces of action. In addition to foregrounding the conflicts of narrative perspective as outlined above, the cutaways to other spaces and actions systematically delay responses to urgent dramatic questions. The effect of such editing is to leave the spectator in suspense – i.e. suspended in anticipation of action, which will resolve the interrupted chain of action.

In other words, interruption and delay are emphatic temporal principles in Dr. Strangelove in cutting from space to space and action to action. For critics interested in pursuing the satirical implication of sexual motifs in the film (e.g. phallic cigars and missiles, the coupling of aircraft during the title sequence, names like Jack D. Ripper, Buck Turgidson, Premier Kissoff, Ripper's explanation of how he discovered that fluoridation was part of the international communist conspiracy because of his state of exhaustion after the physical act of love, etc.), it should be pointed out that the implicit sexual connotations at the heart of the film's principle narrative procedure of interruption and delayed gratification is foregrounded in the one scene pointedly situated outside of the three basic spaces of the film. In General Turgidson's bedroom, the General is summoned away from his sexual tryst because of the crisis let loose by Ripper's command. His secretary/girlfriend complains about the interruption to their lovemaking and Turgidson responds, 'Start your countdown, and Bucky will be back before you can say, "Blast Off".' The film then cuts away to Burpelson and poor Miss Scott is left counting down – her Blast Off, as it turns out, to be ever suspended. Perhaps, among other things, Ripper connotes film editor.

Such cutaways, without the explicit erotic signification, structure the entire film. Early in the film, after Ripper has issued the Go Code, Mandrake discovers a radio playing music and becomes quite excited, signaling that the radio is somehow significant. The film immediately cuts away to a scene on Kong's plane, and it is not until the next scene that Mandrake explains that the presence of music on the radio suggests that there is no nuclear crisis (as Ripper has claimed). This particular scene ends with Ripper for the first time enigmati-

cally referring to 'precious bodily fluids' as an explanation for what he has done. The film cuts away to three successive scenes either in the War Room or on Kong's plane before returning to Ripper for something approaching an explanation of 'precious bodily fluids.' In the series of scenes in which the Russian ambassador is first admitted to the War Room and then gets Premier Kissoff on the hotline, each crucial stage of development is interrupted by a cut to a scene on Kong's plane or at Burpelson, thus stretching out the progress of this important action. Most dramatically, at the point when the Ambassador first ominously refers to the Doomsday Machine, a cutaway to Burpelson delays the Ambassador's explanation of its destructive capabilities.

In each of these cases, gestural or dialogue reference to something significant in the unfolding of the story is immediately followed by a cutaway to at least one scene in another space so that the spectator's access to crucial narrative explanation is temporarily held in abeyance. As the film continues, the dramatic significance of what is delayed increases. For example, once Ripper is dead and Mandrake has figured out the recall code, his attempt to transmit it to the War Room is slowed down within individual scenes by Bat Guano's suspicions and the difficulties of placing a phone call to the War Room and by the editing structure that extends his actions over three scenes by inserting a cutaway to Kong's plane.

While dialogue and actions at Burpelson and in the War Room are frequently being interrupted by cuts to Kong's plane, the critical developments on the B-52, most of them unknown to and at cross-purposes with the War Room, are reciprocally being interrupted by cuts to Burpelson or the War Room. After Kong's plane has been only partially damaged by the missile attack, the relatively continuous action of putting out fires, assessing damage, calculating fuel loss, and determining a closer target and reaching it is played out over four scenes on the plane, each interrupted by cutaways to at least one other space of action. Each successive cut from one scene to the next delays the flow of narrative information, always at a dramatically portentous moment. The cross-cutting dynamizes the principle of anticipation, repeatedly leaving the spectator in a state of suspended expectation.

This process culminates in the scene during which Kong finally manages to fly his B-52 and its nuclear payload to its target. The scene is preceded by perhaps the most dramatic cutaway in the entire film. In the War Room, having realized that Kong's plane has not been recalled and is trying to reach a target, the President asks General Turgidson whether there's a chance of Kong's plane getting through. Turgidson, as he has done throughout the film, responds in a totally inappropriate manner. Swelling with pride, he repeats the question, 'Has he got a chance?' and gleefully begins to picture a B-52, flying heroically to its target, his arms spread wide to imitate the plane's flight. He repeats the

question a second time, but then he suddenly freezes in place, his jaw drops, and his massive double take suggests that even he has realized the implications of a successful flight: that it would trigger the atomic holocaust.

The explicit formulation of the hermeneutic question evoking its fatal consequences frames the cutaway to the scene on Kong's plane, which, in effect, answers that question. The scene picks up on the ominous significance of the question and proceeds to respond to it by deploying a battery of suspense techniques within the scene itself. It is by far the longest of the previous ten scenes in the film, thus emphasizing its extended duration. Its actions are structured as a series of sometimes-simultaneous countdowns: dials are set, equipment is checked, the approach to the target is counted off in diminishing miles. The military march music is repeated incessantly. Most dramatically, it is discovered that the bomb-bay doors are jammed, and Kong descends to open them manually. To the tune of the ever-approaching target countdown and the repetitiveness of the music, he struggles with the electronic wiring until, at the last possible second, the doors open to the space below and a bomb ejaculates to its target, Kong riding it bronco-style, emitting a triumphant battle whoop. Shots of exploding mushroom clouds follow.

I wish to explore the complex dynamics of spectators' possible responses to this scene. On the one hand, the scene is framed by a clear articulation of the consequences of the actions. Turgidson's double take, his realization of the disaster at hand, especially articulates the War Room characters' understanding of the situation: that successful completion of the mission will produce the nuclear holocaust. Presumably the spectator shares this perspective; an understanding of the dire outcome of Kong's mission informs the spectator's experience of the scene. We understand that it would be disastrous if he completes his flight successfully.

At the same time, it seems that a plausible spectatorial response (confirmed by my own experience of the film and by many of my students) is to be drawn in by the almost irresistible power of the suspense techniques and to at least partly root for Kong to make it. The effect of the suspense techniques as well as the dramatization of Kong's initiative and perseverance in getting the bomb-bay doors open at the very last second create a possibility of inducing the spectator to forget the implications and identify with Kong's perspective, consistent with the alternating and contradictory focalization that the film has been pursuing throughout its length.

Surely the sudden opening of the bomb-bay doors and the flight of the missile towards its target are experienced with a degree of exhilaration – with admiration for Kong's exercise of skill and initiative against all odds, with a sense of liberation of the bomb from its womb-like interior space into the open air, with a sense of release for the spectator from the 'Will he make it or won't he?'

suspense of the whole film. Surely the spectator experiences 'Blast Off' on some level and to some degree.

What I'm suggesting is that Kubrick's structuring, especially his deployment of suspense techniques, creates the possibility of an intolerable irony for the spectator, an experience of rooting for the plane to make it and of briefly celebrating the victory of the mission. Put in another way, what Kubrick has done is to create an experience for the spectator analogous to General Turgidson's when the President asks, 'Has he got a chance?' Briefly, we are induced to forget the implications and respond spontaneously and habitually, as we usually do to a dramatically suspenseful action scene in the movies. We identify with the hero in his last second heroic resolution of his task. Then Kubrick pulls us up short, shows us the mushroom clouds, and reminds us of the consequences of the hero's actions. In effect, like Turgidson, we too perform a double take and reflect on the implications.

As I have argued in relation to Turgidson, a major theme of the film is the inappropriateness of reaction, language, mindset, and established patterns of thought when confronted with the new cataclysmic reality of nuclear warfare. This theme is primarily dramatized in the satirical presentation of military and political figures. However, the ironic disparity between situation (nuclear extermination) and response (habituated) is also addressed on the level of spectatorial experience. The film invites or at the very least creates the conditions for the spectator to make inappropriate responses, responses learned from the habit of conventional movie-going but that are inappropriate in relation to the subject of nuclear warfare. The central trope that animates Dr. Strangelove is irony. Hayden White suggests the 'basic figurative tactic of Irony is catachresis (literally 'misuse'), the manifestly absurd Metaphor designed to inspire Ironic second thoughts about the nature of the thing characterized or the inadequacy of the characterization itself.'[20]

In the suspenseful unfolding of this final scene on Major Kong's plane, Kubrick induces precisely such an ironic second thought on the part of the spectator. We are drawn into identification with Kong's actions, only to be shown the consequences of these actions – exploding atomic mushroom clouds. We are dramatically pulled out of our own inappropriate reaction; we are induced into our own double take, our own second thoughts.

The film's remaining dramatic scene extends this dynamic both through its subject matter and through a final extremely complex series of narrative and temporal articulations. The shots of the opening bomb-bay doors and of the nuclear-armed missile speeding to its target answer the film's ever-escalating series of hermeneutic questions: indeed, the War Room has not managed to recall all the planes, as one has gotten through, bombed its target and presumably triggered the Doomsday Machine. This climactic shot is followed by sev-

eral shots of exploding mushroom clouds, suggesting a continuing succession of nuclear explosions. This is a significant shift in temporal mode from singulative to iterative.[21] The narrative has been largely structured on three parallel strands, each organized in linear fashion and each interrupting the others to expand the suspenseful issues. Now, suddenly, at the moment of climax, at the moment when the spectator is brought up short in his or her absorption in these suspenseful questions, the film shifts temporal gears: a few shots suggest a prolonged condition of exploding nuclear clouds.

From these shots, the film cuts back to the War Room, to a shot centering Dr. Strangelove. An unspecified period of time has passed, but enough time for the characters to understand that the nuclear holocaust is proceeding. They discuss possible responses: life in mineshafts, the condition of such life, etc. Importantly, all the War Room characters – the generals, the Russian Ambassador, the President of the United States – defer to the expertise of Dr. Strangelove, the scientific technocrat who can be seen partly as the cause of the situation they are in – the cut from exploding mushroom clouds to Dr. Strangelove implies causality – and the only source for guidance and comfort. (Typically, he poses his comfort in sexual terms, assuring the totally male command that a ratio of ten women for each man will be necessary in mineshaft culture to insure the continued reproduction of the human race.)

This scene seems curiously suspended from the rest of the film. Structurally, it is disconnected from the suspense trajectory. It is framed by the indeterminate elision after the bomb plummets to its target and by the iterative shots of exploding nuclear clouds briefly before this scene and much more extensively after it ('We'll meet again/Don't know where/Don't know when'). It is a suspended waiting scene, framed by prolonged end scenes in at least two senses – the end of the film and the end of the world.

I want to suggest that it is also an analytic scene – a scene that brings the spectator back to the reality of the nuclear apparatus, back to the realm of ironic second thoughts. The analysis is presented in brilliant satiric form, dramatized in what becomes, in his utter dominance of the scene, Dr. Strangelove's extended comic soliloquy, his hysteric outpouring of words and gestures.

This soliloquy amounts to an analysis of the apparatus of nuclear warfare presented in comic satirical form. Dr. Strangelove in his specific role in the film and in his gestures and words constitutes a metaphor for the war machine. To start with, he is a Rand Corporation-like military scientific technocrat, that is, a representative of the institution most responsible for the development and rationale of the nuclear war apparatus. Again, as de Landa puts it, such technocrats are a mutation of the institutional brain of the apparatus of nuclear warfare. He is a mad scientist, science gone mad. He is literally a mutation in that

he is part man and part machine; his wheelchair is so essential to his mobility that he is inseparable from it. Moreover, he has an arm that operates on machinic principles, independent from his biological control. The hand at the end of that arm at one point tries to strangle him; thus his machinic component is self-destructive. It also uncontrollably thrusts itself into a '*Heil Hitler*' salute at the same time as Strangelove's verbalization mistakes his President for '*Mein Führer*,' thus locating and defining his technocratic genius in its German Nazi history. Dr. Strangelove is ... Strange Love, a mutation or inversion of love and sexuality. He is the death instinct. Importantly, in the film's final gesture, just before the montage of mushroom clouds suggests the planet's prolonged envelopment in atomic radiation, he is able to rise from his wheelchair, take a few lurching steps, and hysterically cry out 'Mein Führer, I can walk.' Within the dysfunctional logic of the nuclear war apparatus and in the midst of nuclear holocaust, Dr. Strangelove can be cured, can be reborn.

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Notes

1. In a letter to the *New York Times* protesting Bosley Crowther's negative review. Quoted in Vincent Lo Brutto, *Stanley Kubrick: A Biography* (New York: Da Capo Press, 1999), p. 248.
2. Manuel de Landa, *War in the Age of Intelligent Machines* (New York: Zone Books, 1991), p. 191.
3. Joseph Gelmis, 'The Film Director as Superstar: Stanley Kubrick,' in Gene D. Phillips ed. *Stanley Kubrick Interviews* (Jackson: University Press of Mississippi, 2001) p. 309.
4. Lo Brutto, *Stanley Kubrick*, p. 241.
5. De Landa, *War in the Age of Intelligent Machines*, p. 4.
6. Ibid., p. 20.
7. Ibid., p. 2.
8. Ibid., p. 51.
9. Ibid., p. 5.
10. Ibid., p. 58.
11. Ibid., p. 60.
12. The theory of focalization which informs the following discussion is based on Gerard Genette, *Narrative Discourse: An Essay in Method* (Ithaca, N.Y.: Cornell University Press, 1972), pp. 185-211.
13. Paul Virilio, *War and Cinema: The Logistics of Perception* (New York: Verso, 1989), p. 72.

14. De Landa, *War in the Age of Intelligent Machines*, p. 5.
15. Ibid., p. 23.
16. Ibid., p. 5.
17. Ibid., p. 78.
18. Ibid., p. 38.
19. Roland Barthes, *S/Z (New York: Hill and Wang, 1974), pp. 17, 19. Barthes defines the hermeneutic code as involving 'the various (formal) terms by which an enigma [or question] can be distinguished, suggested, formulated, held in suspense, and finally disclosed over the course of a narrative.' The precision with which he defines the dynamics of proposing and formulating narrative questions and of delaying (i.e. holding in suspense) their solution is very productive for an understanding of narrative suspense.*
20. Hayden White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe*. (Baltimore, MD: Johns Hopkins University Press, 1973), p. 37.
21. Genette, *Narrative Discourse*, p. 116. Genette defines the iterative as 'a single narrative utterance [which] takes upon itself several occurrences together of the same event.'

Collection and Recollection

On Film Itineraries and Museum Walks

Giuliana Bruno

'Recollection is a discarded garment.'
Søren Kierkegaard

A garment, discarded. A texture that holds a text. As part of an aesthetic collection that speaks of its wearer's taste, the discarded garment enacts recollection, recalling for us the person who inhabited its surface – the lively body that 'animated' it in motion. A familiar scenario for the artist Christian Boltanski, the material of the discarded garment embodies a projection: the textile surface acts as a screen. The filmic screen is also fiber, a material weave that absorbs and reflects. Such is the screen – the fabric – upon which the stories of history are inscribed.

It is from this narrative of the discarded garment that I would like to launch a reflection on the mobile activity of recollection. If this essay joins recollection and garment on a screen, it is to call attention to the 'fashioning' of archival space, considering, in particular, the place of cinema and the museum in this process. Ultimately, its aim is to foreground the interaction between film's imaginative route and the museum walk and, recognizing a reversible process at work, to link their emotive impact along the experiential path that includes acts of memory, the itinerary of the imagination, the place of collection, and the journey of recollection.

Cinema and memory have been linked since the inception of film history and theory. They are bonded, as we will see, in the very archaeology of the moving image and its exhibitionary spaces. In his 1916 pioneering study of cinema, Hugo Münsterberg introduced a model of theory that accounted for the intimate binding of film to affects and memory.[1] Münsterberg underscored the psychic force of filmic representation and claimed that the medium itself is a 'projection' of the way our minds work. Cinema is a materialization of our psychic life. It makes visibly tangible all psychic phenomena, including the work of memory and of the imagination, the capacity for attention, the design of depth and movement, and the mapping of affects. In suggesting that with

film, 'we have really an objectivation of our memory function,' Münsterberg claimed cinema's fundamental mnemonic function.[2] Film is a medium that can not only reflect but also produce the layout of our mnemonic landscape. It is an agent of intersubjective and cultural memory.

Mnemonics is an integral part of film's own geopsychic apparatus. If the design of memory is a generative function of cinema, this mnemotechnical feature of the medium is even apparent at the textual level. The work of memory is particularly prominent in science fiction film and in film noir, two modes of storytelling whose narrative borders fluctuate and often overlap. As part of its plot making, film noir engages mind games and is particularly fond of playing tricks with memory, engaging both personal and social history as it does so. Its more contemporary offspring, from Blade Runner (1982) to Memento (2000), have taken upon themselves the task of reminding us of the very change of memory's status in our culture. These films expose modern memory as images and pictures – as the very *architecture* of memory. Mnemonic traces slide toward and collide with marks on celluloid. Film repeatedly shows that pictures – moving pictures – are the current documents of our histories. Indeed, filmic memories – fragile yet enduring – are fragments of an *archival* process that is porously embedded in our path, part of our own shifting geography.

The geography of museum culture has changed as well and now incorporates moving images in various forms of exhibitionary practice. The museum's own agency as a space of cultural memory has been mobilized by the presence of moving images in its field. To reflect on this new geography of (re)collection we thus need to pursue the critical interaction between art and film and to engage the discourse of exhibition. Considerations of exhibition are the focus of a current reconfiguration of art history and curatorship.[3] In its many compelling forms, exhibition has become a locus of serious artistic practice as well and a site for the study of the design politics of artistic space.[4] The resonance between art and architecture is a particularly fruitful issue for the reconfiguration of exhibition and one that both concerns and affects the work of film. Film theory, however, despite its interest in exhibition, has yet to engage fully with this art-historical discourse. This remains the case even though film has encountered art on the terrain of exhibition in many ways. The intent here, in considering the space of cinema and the museum and their possible conjunctions, is to sustain interdisciplinary research and foster a cross-pollination of film and art theory.[5] This means opening the doors of the movie house and showing that the motor-force of cinema extends beyond the borders of film's own venues of circulation. The affective life of cinema has a vast range of effects and, in general, its representational and cultural itineraries are productive outside the film theater. They are implanted, among other places, in the performative space of the art gallery, and they affect the nature and reception

of this space. In the spirit of theoretical crossovers, let us then pursue this interaction and look at the encounters between film and art at the interface of the museum wall and the film screen.

Film and Museum *Architexture*

The work of Lewis Mumford provides insights that can enlighten this interface between film and art and guide us in theorizing the subject of an archive of (e)motion pictures. It was Mumford who, early on, articulated an interaction between cinema and the museum in architectural terms by assigning a museographic function to film. In his view, film becomes a modern way of documenting the memorials of culture by presenting different modes of life and past existences. In this way, it allows us to cope with other historical periods, or rather, as he put it, to have 'intercourse' with them. According to Mumford:

> Starting itself as a chance accumulation of relics, with no more rhyme or reason than the city itself, the museum at last presents itself to use as a means of selectively preserving the memorials of culture ... What cannot be kept in existence in material form we may now measure, photograph in still and moving pictures.[6]

For Mumford, the cinema intervenes in museographic culture by providing a measure of what cannot be kept in existence. As it relates to preservation, Mumford's discourse offers a version of the process of embalming that the reproduction of life on film is taken to represent – the mummification process that is activated, at some level, in the genealogy and archaeology of film.

This discourse has circulated in film theory as well, following André Bazin's contemplation of a 'mummy complex' in the arts. For Bazin, cinema is an heir of the plastic arts and represents the most important event in their history, for it both fulfills and liberates art's most fundamental function – the desire to embalm. This 'archaeological' drive embodied in the arts can be uncovered if we dig psychoanalytically into their genealogical texture, according to Bazin:

> If the plastic arts were put under psychoanalysis, the practice of embalming the dead might turn out to be a fundamental factor in their creation. The process might reveal that at the origin of painting and sculpture there lies a mummy complex ... Cinema [is] the furthermost evolution to date of plastic realism.[7]

Bazin recognized that cinema has a place in the history of art and within the space that Mumford defined as the 'memorials of culture.' But Mumford's

view goes further than Bazin's. As it passes through an image of the city and invokes its motion, it offers us a less static picture. Going beyond the notion of cinema as a death mask, Mumford's words enable us to recognize cinema as a moving imprint and an active mnemonic measure: that is, as a *mapping* of an archive of images. Taking this route of mapping a step further (and further away from preservation), we can recognize the random accumulation – the rhyme and rhythm that accrues to the collection of relics – that is mobilized in exhibitionary discourse when it is intersubjectively shared in intimate intercourse. This is precisely the geographic narrative of cinema, the effects of which are equally felt in urban rhythm as random, cumulative assemblage mobilized in e*motion*al traversal. On Mumford's moving map the celluloid archive thus joins the city and the museum. On this field screen, let us consider further the possibility of mapping intersections between wall and screen.

A Tour through the Gallery's Film Archive

Mumford's words lead us to ask how the urban rhyme and rhythm of museographic display, which molded the plastic language of cinema, affects us today in the current space of the museum and the gallery.[8] The convergence of the museum and the cinema is established as a main constituent of film genealogy in Mumford's way of reading collection and recollection. This convergence has become a newly articulated strain in contemporary visual culture. It is especially visible and vital in the realm of art installation. In recent years, we have witnessed an interesting phenomenon – a cultural migration between art and film. Motion pictures have now actually moved. To a certain extent, they have changed address. They have exited the movie house to take up residence in the museum, becoming, in different forms, steady features of gallery shows and museum exhibitions. This phenomenon signals motion on the grounds of cultural memory and its location. An exchange has taken place in many ways on the field screen of visual archives.

In a concrete sense, the new interface has led filmmakers to produce installations that reformulate the architecture of the moving image. They include Chantal Akerman, Atom Egoyan, Peter Greenaway, Hal Hartley, Isaac Julien, Abbas Kiarostami, Chris Marker, Yvonne Rainer, and Raúl Ruiz. A prominent example of this reconfiguration is Akerman's decomposition of her film D'Est (From the East, 1993) in the form of an art installation.[9] The film is literally dislocated: made to reside in triptychs of twenty-four video monitors spread across the gallery space. The gallery viewer is therefore offered the spectatorial pleasure of entering into a film as she physically retraverses the language of

montage. This kind of viewership signals a passage between art, architecture, and film, predicated on exhibition. As Peter Greenaway muses, 'Isn't cinema an exhibition...? Perhaps we can imagine a cinema where both audience and exhibits move.'[10] At times, this movement is directly engaged in the exhibitionary ability to collect and recollect. Such is the case for Isaac Julien's installation *Vagabondia* (2000), which traverses the space of an art collection as it offers a wandering reflection on recollection.[11] Here, a split screen is used to take viewers into the seams of mnemonic space as a loop reiterates the movement of regression into museographic exploration.

Just as filmmakers have turned to installation, many notable contemporary artists, conversely, have turned to filmmaking. This is hardly a new phenomenon, for the language of twentieth-century art has variously intersected with film, especially in its modernist configurations. But the recent incarnation of the exchange engages more directly in the work of narrative and has, at times, a greater predilection for popular culture. Sophie Calle, for instance, who works narratively in photography and is concerned with detecting and investigating intimate space, created with Gregory Shephard Double Blind (1992), a road movie that records, from their different viewpoints, the disintegrating course of their relationship during a car trip across country in the United States.[12] Larry Clark, Robert Longo, David Salle, Julian Schnabel, and Cindy Sherman have all worked in feature film formats, making fiction films that do not fit the rubric of the so-called art film.[13] Rebecca Horn also has creatively navigated the language of fiction, working extensively in film performance and feature film formats for a number of years.[14] Matthew Barney has created his own 'mutant' *Cremaster* film form, working in the interstices of sculpture, photography, video, and cinema to compose anatomical hybrids that challenge distinctions of species and gender and drive them into new, intricate designs.[15]

Moving images have made their way into the art gallery and the museum on a larger scale as well, returning spectatorship to 'exhibition.' This trajectory is reciprocal and is articulated spatially. Looking at the ways in which the art installation has established itself as a crucial nexus in the museum, one cannot help thinking of the cinema. In many ways, the form of this aesthetic – in which art melts into architecture – is reminiscent of the space occupied by cinema itself, that other architectural art form. In even more graphic terms one might say that the rooms of an installation often become a literal projection room, transforming themselves into actual filmic space.

In this hybrid screening process, numerous occurrences of cinematic deconstruction and decomposition have taken place in the museum and gallery space. At times, these experiments resonate with the researches into film language made by an earlier film avant-garde, especially in the cinematic geneal-

ogies of Ken Jacobs or Bruce Conner.[16] Thus a number of contemporary artists have come to engage with the language of film by analyzing specific film texts, retraversing film history, or breaking down film movement and duration. They have deployed in their artistic practice the use of slow motion and such techniques as the freeze frame, looping, and the reworking of found footage. Particularly notable in this respect are the installations of the Canadian artist Stan Douglas, whose media work refashions space and duration in the face of history and in the guise of historical memory, thereby propelling a remapping of cultural landscapes by means of historical inventories of representation, including cinema's own.[17] As Kerry Brougher claims (and has demonstrated in the space of an exhibition), in many ways 'the cinematic is alive and well within ... the network of images and sounds' mobilized in art.[18] A 1996 London exhibition in which the relationship between art and films was staged further proved that such crossovers can, indeed, hold one 'Spellbound.'[19] Without pretending to assess the state of the art, and aware of the limits of an essay, these partial observations are meant to point out that the genealogical life of film is being extended – perhaps even distended – in the space of the contemporary gallery.

On one level, what has occurred in the exhibition space is something that resembles a drive to access the work of the film apparatus itself in relation to modes of picturing. Having gained this access, the installation space then contributes to a remapping of the cultural space of the cinema, as well as the cultural space of art. In this exchange between art and film, the seduction of the screen is displayed – in all its fragmentation and dissolution – at the 'nerve center' of viewing positions, creating possibilities for exploring points of montage, narrative junctures, and the art of framing. Sometimes the discourses of art and film intertwine directly in the archive of film genealogy. This is the case for works such as Chris Marker's Silent Movie (1994-95), an actual archival project. Marker remakes film history in a multiple-video installation that engages film's modernity, its urban physiognomy and motion.[20] A different example of exploring film history is offered in a specifically genealogical work by the Scottish artist Douglas Gordon, whose manipulation of cinematic material has included extending Alfred Hitchcock's Psycho into a 24 Hour Psycho (1993) installation event.[21] His *Hysterical* (1995) is a video installation that rereads the familiar relationship between hysteria and representation. It projects onto two screens footage from a silent film, making two loops – one moving at normal speed, the other in slow motion – whose rhythms occasionally and casually meet up. The archival source, a filmed medical experiment, remains unnamed in the installation loop, but it is identifiable on the reel of film history as La Neuropatologia (*Neuropathology*).[22] When the Italian doctor Camillo Negro filmed this with Roberto Omegna in 1908, he exhibited the supposed 'fe-

male malady' as the theatrics of representation itself. When the film was first shown, a reviewer aptly remarked that 'the white film screen was transformed into an anatomical table.'[23] The comment points to the sort of genealogy Gordon exposes as, reworking the film in an art gallery, he exhibits the very representational grounds upon which the filmic bodyscape itself was built and mobilized.

Gordon's use of the loop exposes another aspect of cinema as well by engaging with its material history. Accentuating the 'wheeling' motion that is the material base of filmic motion and the motor-force of its emotion, Gordon's loop reminds us that the wheel of memory constitutes the very materiality of film. As an intervention on the matter of real duration, it plays on cinema's 'reel' time. This kind of motion is key to creating filmic emotion and to making a genealogic installation into an actual mnemonic project. In fact, Gordon's work shows that film is our collective memory, not simply because of its subject matter but because of the form that represents it: a technique that goes far back in time and has its roots in the *ars memoriae*. Let us recall that the art of memory long relied on a wheeling motion. Back in the thirteenth century, Ramon Lull introduced movement into memory by experimenting with circular motion and creating an art of memory based on setting figures on revolving wheels.[24] The 'reeling' motion of the wheel is therefore itself a mnemonic technique. The many contemporary art installations like Gordon's that play with loops represent a technological remaking of the mnemotechnical apparatus. In other words, by way of image technology, we are still playing with the moving images placed on revolving wheels by Lull, who, understanding the role of movement in memory, represented psychic motion. In fact, this type of circular mechanics, together with the automated motion that includes repetition, constitutes the essential 'wheel' that drives our imaginative processes and forges representational history – a spinning continuum of subjectivity, mnemonics, and imagination that marked the prefilmic history of the mechanics of imaging implanted, eventually, in the movie house.

This type of wheel, inscribed on the cinematic 'reel,' returns as a motif in contemporary art installations that deal with technology and psychic space. By way of Buddhist itineraries and prayer wheels, for example, it shapes the form of Bill Viola's Slowly Turning Narrative (1992), in which the landscape of a video self is meditatively observed in projection on a constantly moving wheel with repetitive sound. Motion, activated in the palimpsestic writing of emotions onto images, informs the subjective representational histories that extend from the waxed mnemonic images of earlier centuries all the way to our digital screen and impresses itself into the transparent layers of Viola's The Veiling (1995).[25]

We are still coupling motion with emotion in filmic reels and in mnemotechnical art installation that reworks the matter of cinematics. A most interesting expression of this cultural movement is found in the loops of Shirin Neshat, who uses this technique as part of an image-making process that is wholly grounded in cinema's history and language.[26] Her trilogy that includes Turbulent (1998), Rapture (1999), and Fervor (2000) deeply engages the specificity of film language and aspects of its history, including the particular cinematic rhythms that characterize Iranian film. Neshat's project is genealogical. Her black-and-white photography and use of discrete, staged scenes clearly resonate on the reel of early film history, while her use of the split screen reinvents for the gallery-goer a fundamental component of cinematic spectatorship. The split screen becomes the place in which the gaze 'takes place' and the site in which it becomes gendered. As we watch, we become the link. We join these two separate gendered worlds as we experience the attraction and longing that occur between the two. As we exchange gazes that could not otherwise be exchanged, we also experience the very filmic work of suture. The erotics of desire are inscribed in the play of the split, in the space of an in-between. Despite the apparent disavowal of editing, Neshat's work is all about montage and its attractions. In the end, it comments on an important aspect of film language. It makes us aware of the fact that, in film, montage is located in the viewing process: that is, it is created in our own psychic space, in the imaginative process of spectatorship. Ultimately, in Neshat's loops and split screens, it is the loops of our imagination and the memory of film history that become embodied.

In many ways, cinema exists for today's artists outside of cinema as a historic space – exists, that is, as a mnemonic history that is fundamentally linked to a technology. Walking in the gallery and the museum, we encounter fragments of this history. Filmic techniques are reimagined as if collected together and recollected on a screen that is now a wall. In the gallery or the museum, one has the recurring sense of taking a walk through – or even into – a film and of being asked to re-experience the movement of cinema in different ways as one refigures its cultural ground of 'site-seeing.'[27] Entering and exiting an installation increasingly recalls the process of inhabiting a movie house, where forms of emotional displacement, cultural habitation, and liminality are experienced. Given the history of the 'installations' that gave rise to film, it is only appropriate that the cinema and the museum should renew their convergence in ways that foster greater hybridization. Let us remind ourselves of this history.

Film Genealogy and Museographic Space

Cinema emerged from an interactive geovisual culture. Indeed, tracing the relation of film to the history of exhibition tactics reveals how early museographic spectacles and practices of curiosity gave rise to the very architecture of interior design that became the cinema.[28] This composite museographic genealogy, characterized by diverse georhythms of site-seeing, comprised a prefilmic theatrics of image collection active in forms of spectacular array that enacted recollection. These spaces for viewing included cabinets of curiosity, wax museums, *tableaux vivants*, fluid and automated spectacular motions, cosmorama rooms, panoramic and dioramic stages, georamic exhibition, vitrine and window display, urban viewing boxes such as *mondo nuovo*, and view painting.

Film exhibition developed in and around these intimate sites of public viewing, within the history of a mobilized architectonics of scenic space in an aesthetics of fractured, sequential, and shifting views. Fragments were crystallized, serialized, and automated in the cabinet of curiosity, the precursor of the museum; objects that were cultural souvenirs offered themselves to spectatorial musing; views developed as an art of viewing, becoming a gallery of *vedute*. This absorption in viewing space then became the '-oramic' architecture of the interior that represented a form of 'installation' *avant la lettre*. Cinema descends from this travel of the room – a waxed, fluid geography of exhibition that came of age in the nineteenth century and molded the following one.

What turned into cinema was an imaginative trajectory that required physical habitation and liminal traversal of the sites of display. The establishment of a public in this historical itinerary made art exhibition cross over into film exhibition. The age that saw the birth of the public was marked in the realm of art by the establishment of such institutions as the Paris Salon, where art was exhibited for public consumption.[29] Cinema, an intimate geography born with the emergence of such a public, is architecturally attached to this notion. The movie house signals the mobilization of public space with its architectonics of display and architectural promenade, experientially implanted in the binding of imaging to spectatorial life.

Site-seeing: Filmic and Architectural Promenades

To further explain the journey of the imagination and the mnemonic traversal that link cinematic to museographic space, it is helpful to revisit 'Montage and Architecture,' an essay written by Sergei Eisenstein in the late 1930s.[30] Here, Eisenstein envisioned a genealogic relation between the architectural ensemble and film, and he designed a moving spectator for both. His method for accomplishing this was to take the reader, quite literally, for a walk. Built as a path, his essay guides us on an imaginative tour:

> The word *path* is not used by chance. Nowadays it is the imaginary path followed by the eye and the varying perceptions of an object that depend on how it appears to the eye. Nowadays it may also be the path followed by the mind across a multiplicity of phenomena, far apart in time and space, gathered in a certain sequence into a single meaningful concept; and these diverse impressions pass in front of an immobile spectator.
> In the past, however, the opposite was the case: the spectator moved between [a series of] carefully disposed phenomena that he observed sequentially with his visual sense.[31]

The (im)mobile film spectator moves across an imaginary path, traversing multiple sites and times. Her fictional navigation connects distant moments and far-apart places. Film inherits the possibility of such a spectatorial voyage from the architectural field. As Eisenstein claimed further, in another reflection on visual space:

> An architectural ensemble ... is a montage from the point of view of a moving spectator ... Cinematographic montage is, too, a means to 'link' in one point – the screen – various elements (fragments) of a phenomenon filmed in diverse dimensions, from diverse points of view and sides.[32]

The filmic path is the modern version of the architectural itinerary, with its own montage of cultural space. Film follows a historical course – that is, a museographic way to collect together various fragments of cultural phenomena from diverse geo-historical moments that are open for spectatorial recollection in space. In this sense, film descends not only historically but also formally from a specific architectural promenade: the geovisual exploration of the curiosity cabinet and the '-oramic' traversal of an architecture of display. It also ventures to draw on the multiple viewpoints of the art of viewing and of the picturesque route, reinventing these practices in modern ways. The consumer of this architectural viewing space is the prototype of the film spectator.

The Architectural Paths of the Art of Memory

Eisenstein's 'imaginistic' vision of the filmic-architectural promenade follows a mnemonic path. It bears the mark of the art of memory and, in particular, its way of linking collection and recollection in a spatial fashion. Let us recall that the art of memory was itself a matter of mapping space and was traditionally an architectural affair. In the first century A.D., more than a hundred years after Cicero's version, Quintilian formulated his architectural understanding of the way memory works, which became a cultural landmark.[33] To remember the different parts of a discourse, one would imagine a building and implant the discourse in site as well as in sequence: that is, one would walk around the building and populate each part of the space with an image; then one would mentally retraverse the building, moving around and through the space, revisiting in turn all the rooms that had been 'decorated' with imaging. Conceived in this way, memories are motion pictures. As Quintilian has it, memory stems from a narrative, mobile, architectural experience of site:

> Some place is chosen of the largest possible extent and characterized by the utmost variety, such as a spacious house divided into a number of rooms. Everything of note therein is carefully imprinted on the mind ... The first thought is placed, as it were, in the forecourt; the second, let us say, in the living-room; the remainder are placed in due order all round the *impluvium*, and entrusted not merely to bedrooms and parlours, but even to the care of statues and the like. This done, when the memory of the facts requires to be revived, all these places are visited in turn ... What I have spoken of as being done in a house can equally well be done in connection with public buildings, a long journey, or going through a city or even with pictures. Or we may even imagine such places to ourselves. We require therefore places, real or imaginary, and images or simulacra which we must, of course, invent for ourselves ... As Cicero says, 'we use places as wax.'[34]

As Frances Yates demonstrates in her study of the subject, the art of memory is a form of inner writing.[35] Such a reading, in fact, can be extended all the way from Plato's 'wax block' of memory to the wax slab of mnemonic traces, impressed on celluloid, in Freud's 'Mystic Writing Pad.'[36] In Cicero and in Quintilian, whose art of memory is particularly relevant here, the type of inner writing that is inscribed in wax is architectural. *Places* are used as wax. They bear the layers of a writing that can be effaced and yet written over again, in a constant redrafting. Places are the site of a mnemonic palimpsest. With respect to this rendering of location, the architecture of memory reveals ties to the filmic experience of place and to the imaginative itinerary set up in a museum. Before motion pictures spatialized and mobilized discourse – substituting for

memory, in the end – the art of memory understood recollection spatially. It made room for image collection and, by means of an architectural promenade, enabled this process of image collection to generate recollection. In this way, memory interacts with the haptic experience of place; it is precisely this experience of revisiting sites that the architectural journey of film sets in place and in motion. Places live in memory and revive in the moving image. It is perhaps because, as the filmmaker Raúl Ruiz puts it, 'Cinema is a mechanical mirror that has a memory'; or, better yet, because it is in this mirror-screen that the architecture of memory lives.[37] Mechanically made in the image of wax simulacra, the projected strip of celluloid is the modern wax tablet. Not only the form but the very space of this *écriture* is reinvented in film's own spatial writing, decor, and palimpsestic architectonics, as well as in the spectatorial promenade. The loci of the art of memory bear the peculiar wax texture of a filmic 'set' – a site of constant redrawing, a place where many stories 'take place' and take the place of memory.

The architectural memory system, grafted onto the site of a house or a building or, indeed, redrawn in (motion) pictures, is also drafted in the form of a visit to a museum: all are sites of the production of mental imaging. The memory inscribed here is material and spatial, and its imaginative visual process is an emotional affair that gives access to knowledge. In fact, as Mary Carruthers shows in her study of mnemonics, 'a memory-image ... is "affective" in nature – that is, it is sensorially derived and emotionally charged ... Recollection [is] a re-enactment of experience, which involves ... imagination and emotion.'[38] Physiological processes are involved in the emotions, for memory affects physical organs and engages our somatic being as it responds by way of movement and mental walks. The objects that are architectonically set in place and revisited in the architectural mnemonic include ideas and feelings, which are thus understood as fundaments of 'collective' decor.

The art of memory that grew out of Quintilian architectonics found a site of development in theater before implanting itself in the theatrics of museum display and in the movie theater. A theatrical version of this art was most prominently offered by Giulio Camillo (1480-1544), who devised his Memory Theater as a collection.[39] According to his theory, inner images, when collected together in meditation, could be expressed by certain corporeal signs and thus materialize and be made visible to beholders in a theater. As Erasmus put it, 'it is because of this corporeal looking that he calls it a theatre.'[40] It is also because of this corporeal mnemonic looking that we may now call this architectonics a movie theater – a house of haptic imaging. As an incarnation of the Memory Theater, the movie theater, too, is an architecture of image collection for collective exploration. It is, in this sense, museographic.

Along this road that connects external space to interior geography, through which the art of memory evolved from mnemonic theater into museum exhibition and the movie theater, the work of Giordano Bruno (1548-1600) plays an important role.[41] His architectural memory system consists of a sequence of memory rooms in which images are placed according to a complex 'curatorial' logic, based on everything from magical geometry to physiognomy to celestial mechanics. In designing a form of 'local memory,' Bruno constructed a type of knowledge that was mobile. In order to map a great number of memory places, he conceived a flow of movement between them, creating a composite geography. In Bruno's mobile architectonics, one can travel through different worlds, assembling disparate places as if connecting the memory sites on a journey (as the filmic spectator or museum visitor does). His art of memory turns the imagination into an alchemy of the inner senses and imparts associative power to images. As shadows of ideas, memories, for Bruno, must be *affectively charged* in order to move us and pass through the doors of the memory archive.

Bruno's mobile architectonics thus results in mapping emotionally striking images that are able to 'move' the affects as they chart the movement of the living world. The pictures of his memory systems look like maps: they dream up that art of mapping imaginary places that became image collecting and cinematic writing. In fact, as an 'art of memory,' film itself draws memory maps. In its memory theater, the spectator-passenger, sent on an architectural journey, endlessly retraces the itineraries of a geographically localized discourse that 'sets' memory in place and reads memories as places. As this architectural art of memory, filmic site-seeing, like the museum's own version, embodies a particularly mobile art of mapping: an e*motion*al mapping.

In the course of mapping this inner space that led to filmic and museographic recollection, the art and theater of memory interacted closely even with actual theater design. It is well known, for example, that London's celebrated Globe Theatre is related to Robert Fludd's Memory Theater. And it was by way of a theatrical incarnation that the art of memory was revived in the movie theater: it was transformed, in architectural terms, in that mnemonic architectonics that became the mark of the movie palace. The atmosphere of the 'atmospheric' movie theater created a sensory remake of mnemonic space. Here, one could walk, once again, in the imaginary garden of memory.

Moving through Inner Landscapes

The notion that memory and the imagination are linked to movement was advanced in yet more geographic ways during the eighteenth century, when motion became more clearly bound to emotion. Motion was craved as a form of stimulation, and sensations were at the basis of this geographical impulse to expand one's inner universe. Although garden theory was not the only site of this articulation, the garden was a privileged locus in this pursuit of emotive space. Diversely shaped by associative philosophies, eighteenth-century landscape design embodied the very idea that motion rules mental activity and generates a 'fancying.' The images gathered by the senses were thought to produce 'trains' of thought.[42] This philosophy of space embodied a form of fluid, emotive geography. Sensuously associative in connecting the local and topographic to the personal, it enhanced the passionate voyage of the imagination. 'Fancying' – that is, the configuration of a series of relationships created on imaginative tracks – was the effect of a spectatorial movement that evolved further in cinema and the museum. It was the emergence of such sensuous, serial imaging (an affective 'transport') that made it possible for the serial image in film and the sequencing of vitrines to come together in receptive motion, and for trains of ideas to inhabit the tracking shots of emotion pictures.

The legacy of the picturesque, in particular, was 'to enable the imagination to form the habit of feeling through the eye.'[43] Sensational movements through the space of the garden 'animated' pictures, foregrounding the type of haptic sensing enacted by film's own animated emotion pictures. Not unlike cinematic space and the display of collections, picturesque space was furthermore an aesthetics of fragments and discontinuities. A mobilized montage of multiple, asymmetrical views emphasized the diversity and heterogeneity of this representational terrain. The obsession for irregularity led to roughness and dishevelment. Fragments turned into a passion for ruins and debris. Relics punctuated the picturesque map, preparing the ground for more modern experiences of recollection.

A memory theater of sensual pleasures, the garden was an exterior that put the spectator in 'touch' with inner space. As one moved through the space of the garden, a constant double movement connected external to internal topographies. The garden was thus an outside turned into an inside; but it was also the projection of an inner world onto the outer geography. In a sensuous mobilization, the exterior of the landscape was transformed into an interior map – the landscape within us – as this inner map was itself culturally mobilized. In this 'moving' way, we came to approach the kind of transport that drives the architectonics of film spectatorship and of museum-going.

Architectural Journeys and The Gardens of Memory

As we consider the extension of the picturesque promenade into modern itineraries of recollection we can uncover another resonant aspect of the art of memory in Eisenstein's own 'imaginistic' theory. In fact, Eisenstein used the 'picturesque' views of Auguste Choisy (the architectural historian interested in peripatetic vision) to illustrate his conception of a filmic-architectural promenade, following Le Corbusier's own appropriation of this vision.[44] Eisenstein and Le Corbusier admired each other's work and shared common ground in many ways, as the architect once acknowledged in an interview. Claiming that 'architecture and film are the only two arts of our time,' he went on to state that 'in my own work I seem to think as Eisenstein does in his films.'[45]

Indeed, their promenades follow the same mnemonic path, which engages the labor of imagination. Before the eyes of a mobile viewer, diverse asymmetrical vistas and 'picturesque shots' are imaged.[46] As the architectural promenade unfolds a variety of viewpoints it makes the visitor of the space, quite literally, a consumer of views – a film 'viewer.' From this moving perspective, one also performs an act of imaginative traversal. An architectural ensemble is 'read' as it is traversed. This is also the case for the cinematic spectacle, for film – the screen of light – is read as it is traversed and is readable inasmuch as it is traversable. As we go through it, it goes through us and our own inner geography.

A filmic passenger is the subject of a practice that is also known to the museum visitor. At one level, this is a passage through light spaces. The passage through light spaces – revived today in contemporary art installation on the gallery wall – is the very spectacle of the cinematic screen and the architectural wall. As Le Corbusier put it, building his notion of the architectural promenade: 'The architectural spectacle offers itself consecutively to view; you follow an itinerary and the views develop with great variety; you play with the flood of light.'[47] Le Corbusier's views of a 'light space' were, indeed, themselves cinematic.[48] Further developing the idea of the *promenade architecturale*, Le Corbusier stated that architecture 'is appreciated *while on the move*, with one's feet ...; while walking, moving from one place to another ... A true architectural promenade [offers] constantly changing views, unexpected, at times surprising.'[49] Here, again, architecture joins film in a practice that engages psychic change in relation to movement. As site-seeing, the architectural promenade of the moving image is inscribed into and interacts with 'streetwalking' and the museum's own narrative peripatetics. In this way, the route of a modern picturesque is constructed, and modern views of memory and imagination take shape on this road, in between the wall and the screen.

Light Space, from Cinema to Art Installation

Thinking of modern views like the ones Le Corbusier helped to shape in relation to promenades, one travels the contact zone between the architectural journey enacted in film and the one mapped out in the art gallery. With architectural sites that are scenically assembled and imaginatively mobilized, an inner site-seeing is atmospherically produced. Such geopsychic traveling is generated in museum walks as well as in film itineraries; both create space for viewing, perusing, and wandering about, and in such a way engage the architecture of memory. Acting like a visitor of a museum, the itinerant spectator of the filmic ensemble reads moving views as imaginative practices of imaging.

Thus generated out of modernity's itineraries, film movement genealogically includes in its cultural space the intimate trajectory of public exhibition. As we have seen, in many ways the exhibitionary itinerary became a filmic architectonics of traveling-dwelling. Now this zone in which the visual arts have interacted with (pre)cinema can be signaled as the very matter of cinematics that attracts art to the moving image in a contemporary hybrid exchange. Today, back in the museum and the gallery space, this moving topography once again can be physically and imaginatively traversed in more hybrid forms, where the genealogy of cinema is displayed on the walls to be walked through, grasped, and reworked.

She who wanders through an art installation acts precisely like a film spectator absorbing and connecting visual spaces. The installation makes manifest the imaginative paths that comprize the language of filmic montage and the course of the spectatorial journey. If, in the movie theater, the filmic-architectural promenade is a kinesthetic process, in the art gallery, one literally walks into the space of the art of memory and into its architecturally produced narrative. One's body traverses sites that are places of the imagination, collected as fragments of a light space and recollected by a spectatorial motion led by emotion. Ultimately, then, the form of the art installation reproduces the haptic path that makes up the very museographic genealogy of cinema.

An editing splice and a loop thus connect the turn of the century and the dawn of the millennium. We can now fully understand why so many contemporary art installations directly engage the genealogy of film. In a historic loop, the moving geography that fabricates the cultural mapping of cinema comes to be exposed, analyzed, even remade – at crucial nerve points – on the field screen of the gallery. This artistic process demands a refiguring of the cinematic work of cultural imaging, and of the space of image circulation, as it forces art to reconfigure itself. Along the way, something important is set in motion: the installation space becomes a renewed theater of image (re)collec-

tion, which both takes the place of and interfaces with that performative space the movie theater has represented for the last century and continues to embody. An archive of moving images comes to be displaced in hybrid, residual interfacing.

Interfacade: Cinema and the Museum

The renewed convergence of moving images and the museum also engages the domain of design. This conflated geography informs the geography of intimate space itself, as well as its forms of liminal navigation. Thus the passage between interior and exterior is not only enacted on the walls of the museum, and in curatorial practices that have absorbed a cinematic itinerary, but is staged, structurally, on the surface of the architectural premise itself. This is an age where new architecture is mobilized with and as museal exhibition, from Bilbao to Berlin, Los Angeles to Paris, Santiago de Compostela to New York, Helsinki to Boston. At the level of a filmic interface, a challenge, then, may involve the task of refiguring spatial cinematics as geopsychic navigation on the screen of the architectural site itself.[50] With his Jewish Museum in Berlin, Daniel Libeskind wonderfully achieves this by engaging with a lived map. Libeskind inscribes (inter)subjective cartography in his design by slashing windows into the building's surface that correspond to places on the map of what Walter Benjamin called 'Lived Berlin.'[51] In the architect's words, the building itself, an architectonics of lacunae, emerges out of 'the openness of what remains of those glimpses across the terrain – glimpses, views and glances ... belonging to a projection of addresses traversing the addressee.'[52]

We appear to be moving toward a cinematic-museographic interfacade. In this respect, we have already witnessed a cultural center/museum such as the Institut du Monde Arabe, designed by Jean Nouvel, in Paris, challenge the permeability of the facade with windows that converge with the mechanics of light-sensitive photographic shutters.[53] Now Frank Gehry's proposed design for a new Guggenheim Museum, stretched out on the waterfront and floating with New York City's harbor life, looks like a film strip unraveled in endless foldings. This architecture of the fold recalls those folds of celluloid that used to be deposited on an editing floor.[54] Gehry says he 'dream[s] of brick melting into metal, a kind of alchemy ... [that tries] to get more liquid, to put feeling, passion and emotion into ... building through motion.'[55] This alchemy, as we have claimed, is the very matter of celluloid imaging – that fluid place where motion becomes emotion. The motion picture, with its fabric and folds of mov-

ing images, circulates an affective *'architexture'*: e*motion* comes into place in fluctuating cultural geography.

In the face of new image-network meltdowns, one might envisage further hybridized geographies, such as those found in the work of architect Hani Rashid. His studio project *220 Minute Museum* (1998) is a timed sequence of eleven virtual museums that was projected onto several movable fabric scrims suspended from pivots on and around the facade of the Storefront for Art and Architecture in New York.[56] Thinking of this pivotal movement as we watch the wheel of museographic debris potentially melting into cinema in the art gallery, we begin to confront an interfaced reconfiguration of the residual pieces of a nomadic visual archive.

*Cin*eres and *Cin*emas

Another dimension of the collision of museographic *architexture* with filmic texture can be exposed by turning to the work of the visual artist Judith Barry, who explores inhabited, imaginary spaces in post-perspectival ways, investing space with whirling history. Here, the museum, the cinema, and the department store share a common architectural form, insofar as all are showcases of cultural design.[57] In her installation *Dépense: A Museum of Irrevocable Loss* (1990), for example, set in an abandoned nineteenth-century marketplace in Glasgow, vitrines of the sort used in history museums become a screen on which to project early silent films of city life. In revisiting this interaction in contemporary installation, we return to an aspect of the genealogy mapped earlier in this essay, for these three exhibitionary sites were, historically, visited the same way: in fluid intersection, passing from space to space, in joined trends of public consumption.[58] Our interest in this relationship extends to the shape of the interior design itself of these spaces and to commonalities in lighting and spatial layout as well as spectatorial architectonics.

Such convergences have not appealed to critics concerned with the demise of spectacle. Moreover, some have maintained that the museum is the cemetery of the artwork. By the same token, the cinema has been declared dead (or deadly) more than once. An appreciation of this design of visual space, however, need not become a celebration of the museum (as) store. We might alternatively think of the fashioning of cultural space as an actual matter of fashion – that is, as haptic texture. The museum, the cinema, and the department store all represent textural places: fabrications of visual fabric, *emoving* archives of imaging. To reclaim the museum and the cinema from the land of the dead is to 'refashion' them together in this archival interface, connecting their exhibition

and spectatorship on the level of *habitus*. After all, *habitus*, as a mode of being, is rooted in *habitare*, dwelling. That is to say, we inhabit space tactilely by way of habit, and tangibly so. If *habitus* and habitation are haptically bound, *abito*, which in Italian means dress, is an element of their connection. It comes from the same Latin root. A haptic bond links sheltering to clothing the body. In fact, *abito* is both a dress and an address. In German, too, *wand*, which connotes both wall and screen, is connected to *gewand*, meaning garment or clothing.[59] In other words, to occupy a space is to wear it. A building, like a dress, is worn, and wears out. As we recognize this fashion of dwelling, we return to the 'discarded garment' – that sartorial notion with which we began our musing on recollection.

Such a theoretical fabrication will also take into account the fact that a *habitus*, in the definition of Pierre Bourdieu, is not only a cultural design but also cultural baggage.[60] This understanding of design does not reject the past but, indeed, enables us to conceive of it as a 'suitcase' with which we may return to the cemetery – for it may contain something we need today or something we desire for the future. We might wish to concede to the cemetery a certain heterotopic liveliness insofar as it displays a conflated geography and historicity. The city of the dead is not frozen in time. It does not simply hold or arrest but extends life, for it is a geography of accumulating duration offered to a public. This permeable site is capable of inhabiting multiple points in time and of collapsing multiple (body) spaces into a single place. This cumulative view of the cemetery may enable us to look differently at the conjoined histories of topoi like the cinema and the museum, which fashion, like the cemetery itself, a mnemonic archive of images. Moving in this way from *cine*res to *cine*mas, from the ashes of the necropolis to the residual cine-city, something of this heterotopic force may be opened up to more hybrid forms of reinvention.

Traversing the interface of *cine*mas and *cine*res is an archaeological project – one that exposes the conflation of images in the present as a way of looking at their future. There might be in store for us an altogether new configuration of the architectonics of moving images that should proceed along with the funereal project, for both are woven into the fabric of the spectatorial *habitus*. After all, museographic sites are, as we have seen, consumer versions of the architectonics of memory theaters. In other words, as Benjamin put it, 'memory is not an instrument for exploring the past but its theatre.'[61] In such a way, museums, like memory theaters, have genealogically offered to cinema the heterotopic dimension of compressed, connected sites. A movie house provides a version of the spatial work of memory, requiring the labor of search and the accumulation of imaging; it furnishes a fictional itinerary that traverses historical materialities and bridges the path from producer to consumer.

In some way, then, the cumulating fictions of the cinema and the architecture of film theaters have come to reinvent – however transformed in heterologies – some of the imaginative process that, in 1947, André Malraux called the *musée imaginaire*: a boundless notion of imaginative production that, in English translation, even becomes 'a museum without walls.'[62] As art historian Denis Hollier notes, Malraux's imaginary museum was itself 'a museum conceived in terms of cinema.'[63] This interaction has invested the architectural premise with an interface of passage. It is important to note that museum derives from muse: at the root of the museum is the activity of 'musing.' Not unlike 'fancying,' this is a space of moving absorption. In the kind of musing that makes up the museum experience, to wonder is to wander. Historically, the museum has been experienced through this practice of perambulation in a trajectory that, in the age of modernism, is laid out as a spiral – most notably literalized, as Rosalind Krauss notes, in Frank Lloyd Wright's design for the Guggenheim Museum in New York City.[64] In the cinema, another product of modernity, the perambulating activity takes place as an imaginary process, also interfacing exterior and interior. One practice has not been substituted for the other, although, at times, one has taken the other's place and, in so doing, has changed the very nature of that place. The stories written on the mobilized figures of the transparent wall that is the screen, and on the space that surrounds it, are there to be retraversed by the film/museum-goer, for the fluid collection of imaging in both invites a shifting form of recollection. The interface between the exhibition wall and the film screen, as mapped here, is thus both reversible and reciprocal, even in the process of transhistorical imagination. A work of mutual historical 'resonance,' to use Stephen Greenblatt's notion, is set in motion as the cultural force of the interface.[65] Here, memory places are searched and inhabited throughout time in interconnected visual geographies, thus rendering, through cumulation and scanning, our fragile place in history. This *architexture* is an absorbing screen, breathing in the passage and the conflated layers of materially lived space in motion.

Ways of experiencing cinema also inform the imaginative space of the museum inasmuch as both are public-private affairs that are constantly mutating. If, in evolving form, the museum serves as 'counter-hegemonic memory,' in the apt words of Andreas Huyssen, such capacity for cumulation of temporality and reflection on subjectivity runs counter to mummification.[66] A transient memorial function can also shift and travel in other mediatic spaces. In fact, when our feelings about temporality and subjectivity change, they also change cultural locations. The notion that the movie theater has come to inhabit this shifting museal *architecture* is literally 'exhibited,' for it even shapes the architectural appearance of the movie house. This affective change is played out on the very surface of the space. The architecture of the movie palace, with its re-

current memorial decor, temple motifs, and funerary design, and of the 'atmospheric' theater, with its penchant for architectural mnemonics, suggests that cinema is the kind of museum that may even act as a secular place of mourning. In the range of its offerings, it houses a variety of liminal experiences, including an inner search that is publicly shared and exhibited. The museum, according to Carol Duncan, also publicly houses the performance of such private voyages, inscribed in the ritual history and dramas that constitute museographic spectatorship.[67] In the narrative habitation of the installation space, as in the liminal movie house, personal experiences and geopsychic transformations are transiently lived in the presence of a community of strangers.

Over time, the itinerary of public privacy has built its own museographic architectures, changing and exchanging, renewing and reinventing the rhyme and rhythm of social mnemonics in an architextural trajectory that transforms *cine*res into *cine*mas. If, as the French historian Pierre Nora puts it, there are now only *lieux de mémoire* which are 'fundamentally remains,' then 'modern memory is, above all, archival.'[68] But sites of memory are generated in the interplay of history. In this sense, cinema, as constructed here, is the unstable site that, against monumentalization, affirms a transmigrating documentation of memory: itself a trace, it is an essential part of a museographic archive of *cine*res. The modern experience of memory is, quite simply, a moving representational archive. Such a museum of emotion pictures has been built along the retrospective route that has taken us to and from cabinets and *studioli*, museums and exhibition halls, houses and movie houses.

Our atlas of memory consists of this kind of textural exposure, which travels in different public rooms (of one's own) in reversible routes, in passage on a field screen that interfaces with cultural itineraries. After all, Mnemosyne – the mythological figure of memory who, according to legend, was the mother of knowledge – became an 'atlas' in the hands of the art historian Aby Warburg, taking on the shape of an atlas-album at the very threshold of the cinematic age. As Warburg himself put it, the enduring 'images of the Mnemosyne atlas are ... the representation of life in motion.'[69] Paying particular attention to 'the engrams of affective experience' and 'including the entire range of vital kinetic manifestations,' Warburg pictured on panels 'the dynamics of exchange of expressive values in relation to the techniques of their means of transport.'[70] This included the design of a room, the physical movement of a person, and the flow of a dress. Concluding that 'the figurative language of gestures ... compels one to relive the experience of human emotion,' he mapped 'the movement of life' with his 'pathos formulas' in atlas form.[71] Thus mapped in visual space, the Mnemosyne atlas did not simply take up a new place in this realm but became space itself: a multi-screened theater of (re)collection. A peculiar atlas. A movie theater. The perambulating affair, proper to museum-going and

its architectures of transit, transferred in reciprocal ways to imaginative film spectatorship and, thus mobilized and interfaced, became the circulation of an album of views – the 'atlas' that is our own museum.

An Album of Views, An Archive of Imaging

Inscribed on transparent celluloid and scripted in its mechanical history, the cultural journey of images projected onto the white screen surface has become a museum of e*motion* pictures. But this museographic function of the moving image was acknowledged as a mnemonic affair from the time of precinema. Speaking of the daguerreotype and its future in 1838, a critic interestingly observed the relation of the photographic image to a potential atlas-album:

> How satisfying the possession of this machine must be to a traveler, or to a lady who, wishing to make an album of the finest views that have ever struck her eyes, can compel Nature to reproduce them as perfectly as She herself has created them.[72]

The imaginative passion – the drive to design an imagined geography, to circulate a *collection* of one's 'views' – ventured forth into filmic traveling as film intersected with the movement of museographic culture in the act of documenting space, which issued from the desire to make a private 'album' of moving views for public consumption.

In an archival way, the culture of travel, formed in relation to imaging, has engaged the moving image as a site of intimate exploration – a screen of personal and social, private and public narratives. This ultimate residual incarnation of modernity's trajectory created an imaginary mobilization of the traveling room. In such a way, cinema – a nomadic archive of images – became a map of intersubjective views. A haptic *architexture*. A topophilic affair. A place for the love of place. A site of close picturing for undistanced e*motion*. A museum of emotion pictures.

The Emotion of Topophilia: Voyages of the Room

A form of topophilia molds the museographic discourse that exposes the labor of intimate geography – a love of place that works together with the residual texture of *cineres*.[73] As we come to the close of our exploration of this mental geography, we might pause to consider that, as Simon Schama shows, any landscape is a work of the mind.[74] In this vein, a cultural landscape, broadly con-

ceived, can be regarded in many ways as a trace of the memories, the attention, and the imagination of those inhabitant-passengers who have traversed it at different times. It is an intertextural terrain of passage that carries its own representation in the threads of its fabric, weaving it on intersecting screens. A palpable imprint is left in this moving landscape; in its folds, gaps, and layers, the geography of cinema and the museum holds remnants of what has been projected onto it at every *transito*, including the e*motion*s. Imaged in this way, such a landscape is an archaeology of the present.

From the art of memory to the emotional maps of film and museum viewing, we experience, on topophilic grounds, an architecture of inner voyage, a geography of intimate space. Filmic site-seeing is immersed in the geopsychic act of interfacing affect and place that has driven the architectonics of memory from Quintilian all the way to the art of Janet Cardiff, whose own 'Walks' reinvent this mnemotechnics in a contemporary aesthetic practice.[75] Cinematically, the affect is rewritten on the cultural terrain as on a palimpsest, and the moving landscape returns a sign of affect. Residing in this way as an 'in-between,' in a pause of movement, permanence turns into permeability as intimacy becomes publicly shared in the museum-movie house.

Space – including cinematic space – *emoves* because, charged with layers of topophilic e*motion*s, it is invested with the ability to nourish the self. This psychic process involves making claims and demands on the site. Cultures and individuals fixate on specific landscapes for different reasons and reactively pursue them. A traveler seeking a particular landscape may go there, even filmically, to be replenished, restored, held, and fed.[76] In the hub of traveling and dwelling, we are absorbed in the stream of e*motion*s and experience an embracing affective transport. The museum – itself a psychogeographic landscape – is likewise one of these topophilic places that can hold us in its design and navigate our story. In this 'film' of cultural landscapes our own unconscious comes to be housed.

People are drawn to places – museums included – for psychic reasons, just as they may find themselves emotionally attracted to a place of moving pictures. This includes revisiting affective sites of trauma, as the wounded architectural work of the artist Doris Salcedo reminds us.[77] Her passage into counter-memorial is a kind of mourning, a process that works by way of incorporation. Such a passage can make textural exposure something that binds. We are held there, in the material site of loss, in the traces of the fabric remnants that constitute the 'discarded garment' of recollection. But it is precisely this intimate holding in affective vicinity, in the *architexture* of loss, that can become a form of sustenance and a way of moving on with life. It is in this way that *cine*res turn into *cine*ma.

As they are materially traversed in representation – in itineraries of affective reality that include museums and motion pictures – places change shape. Sometimes a site speaks only of passage and revisitation, for when we absorb places as they absorb what is laid out on them, an iterative mapping emerges. On this terrain, cartography encounters psychoanalysis, for, as we learned long ago from Gaston Bachelard, not only is 'the unconscious ... housed' but, in the poetics of space, 'a voyage unreels a film of houses.'[78] Now, having passed through the mnemotechnic architectonics of museographic culture, we can uncover the (psycho)analytic residue. This itinerary excavates one's archaeology: the fragments and relics of one's *terrae incognitae*, sometimes traveled so much by way of habit and habitation that they have become unknown. Such is the ruined map recollected in the cinema and the museum. Wandering in this imaginary atlas-album, the fabric of this fabrication – an *architexture* – shows.

In the course of the journey of film, we are held, as in the museum walk, in an intimate binding that can even 'transport' us backward. This is the place of 'projections,' where the voyage of the unconscious works itself into stories and dreams that end up populating the walls of the room. In this sense, the museum is a house of pictures, like film's own movie 'house.' Evanescent and fugitive, emotion pictures fix themselves on the screen surface – the skin of film – reflective and translucent. Layered on the white texture of an erasable palimpsest, moving images can be the wallpaper of a room, the peeling layers of painted and inhabited stories, the fanciful decor of a *studiolo*, the traces of analytic debris. Housed in spectatorship, such cinematics of e*motion* – the very *tac*tics mobilized today in art installation – reinvents what Xavier de Maistre called a *Voyage around My Room*.[79] This exploration of the room is held in the 'room' of the camera obscura/lucida, revisited in the room of the installation, attached to the room of one's own. In this residual sense, the architectural journey is, indeed, an emotional voyage. It is an actual matter of 'interior design.' In filmic-museographic architecture, a wall that is a textured screen projects the inner film that is our own museum.

Notes

1. Hugo Münsterberg, *The Film: A Psychological Study: The Silent Photoplay in 1916* (New York: Dover, 1970).
2. Ibid., p. 41.
3. See, for example, Kyanston McShine ed., *The Museum as Muse: Artists Reflect* (New York: The Museum of Modern Art, 1999) (exhibition catalogue); and Ingrid

Schaffner and Matthias Winzen, eds., *Deep Storage: Collecting, Storing, and Archiving in Art* (New York: Prestel, 1998) (exhibition catalogue).

4. See, among others, Reesa Greenberg, Bruce W. Ferguson, and Sandy Nairne, eds., *Thinking about Exhibitions* (New York: Routledge, 1996); *The End(s) of the Museum*, (Barcelona: Fundació Antoni Tàpies, 1996); Lynne Cooke and Peter Wollen, eds., *Visual Display: Culture Beyond Appearances* (Seattle: Bay Press, 1995); Tony Bennett, *The Birth of the Museum* (London: Routledge, 1995); Daniel J. Scherman and Irit Rogoff, eds., *Museum Culture: Histories, Discourses, Spectacles* (Minneapolis: University of Minnesota Press, 1994); Susan M. Pearce, *Museums, Objects and Collections: A Cultural Study* (Leicester, England: Leicester University, 1992); Eilean Hooper-Greenhill, *Museums and the Shaping of Knowledge* (New York: Routledge, 1992); and Ivan Karp and Steven D. Lavine, eds., *Exhibiting Cultures: The Poetics and Politics of Museum Display* (Washington, D.C.: Smithsonian Institution Press, 1991).
5. This work seeks to pursue the interdisciplinary study of art and film, both of which are lifelong passions of Annette Michelson, to whom this essay is dedicated. On art and film, and their function as cognitive instruments, see her *On the Eve of the Future* (Cambridge, Mass.: MIT Press, forthcoming). For the study of art and film, see also Peter Wollen, *Raiding the Icebox: Reflections on Twentieth-Century Culture* (Bloomington: Indiana University Press, 1993); and Anne Hollander, *Moving Pictures* (Cambridge, Mass.: Harvard University Press, 1991).
6. Lewis Mumford, 'The Death of the Monument,' in J. L. Martin, Ben Nicholson, and N. Gabo, eds., *Circle: International Survey of Constructivist Art* (New York: E. Weyhe, 1937), p. 267.
7. André Bazin, *What is Cinema?*, ed. and trans. Hugh Gray (Berkeley: University of California Press, 1967), pp. 9-10.
8. There are obvious and established institutional differences between the gallery and the museum, which are not discussed here. It is important to note, however, that in terms of modes of display, curatorial strategies, and the amount of space offered to contemporary art, the distance between the two has diminished in the United States. Here, young artists move easily and quickly between gallery and museum exhibitions, many intersecting and hybrid exhibition spaces have been created, and alliances between all of these have taken place. These reasons partially excuse an excursus that combines the two discourses without delving into their differences.
9. On this work, see *Bordering on Fiction: Chantal Akerman's 'D'Est'* (Minneapolis: Walker Art Center, 1995) (exhibition catalogue). The exhibition originated at the Walker Art Center in Minneapolis and was on view at the Jewish Museum in New York, 23 February-27 May 1997.
10. Peter Greenaway, *The Stairs 2: Munich, Projection* (London: Merrell Holberton, 1995), p. 24.
11. Julien's *Vagabondia* explores recollection in London's Sir John Soane Museum, home of the architect Sir John Soane (1753-1837) and was first shown there in the exhibition 'Retrace Your Steps: Remember Tomorrow.' It was shown at the MIT List Visual Arts Center in Cambridge, Massachusetts, 22 April-1 July 2001.
12. On this film, see Robert Beck, 'Paranoia by the Dashboard Light: Sophie Calle's and Gregory Shephard's *Double Blind*,' *Parkett*, no. 36 (1993), especially p. 109.

13. Larry Clark directed KIDS (1995), ANOTHER DAY IN PARADISE (1998), and BULLY (2001); Robert Longo directed JOHNNY MNEMONIC (1995); David Salle directed SEARCH AND DESTROY (1995); Julian Schnabel directed BASQUIAT (1996) and BEFORE NIGHT FALLS (2000); and Cindy Sherman directed OFFICE KILLER (1997). On artists making films, see Thyrza Nichols Goodeve, 'Fade to Blue,' *Guggenheim Magazine* 10 (Spring 1997), pp. 40-47.
14. On Horn's film and installation work see Giuliana Bruno, 'Interiors: Anatomies of the Bride Machine,' in *Rebecca Horn* (New York: Guggenheim Museum, 1993) (exhibition catalogue), with complete filmography and bibliography.
15. On one of the films of the Cremaster series, see Matthew Barney, *Cremaster 5* (New York: Barbara Gladstone Gallery, 1997) (exhibition catalogue). Other work in the series includes *Cremaster 1* (1995), *Cremaster 4* (1994), *Cremaster 2* (1999), and *Cremaster 3* (2002). For a critical reading of the series, see Norman Bryson, 'Matthew Barney's Gonadotrophic Cavalcade,' *Parkett* 45 (1995), pp. 28-41.
16. On Jacob's work see Bart Testa, *Back and Forth: Early Cinema and the Avant-Garde* (Toronto: Art Gallery of Ontario, 1993) (exhibition catalogue); and William C. Wees, *Recycled Images: The Art and Politics of Found Footage Films* (New York: Anthology Film Archives, 1993). On Conner, see *Bruce Conner: Sculpture/Assemblages/Drawings/Films* (Waltham, Mass.: Rose Art Museum, Brandeis University, 1965) (exhibition catalogue); Anthony Reveaux, *Bruce Conner* (Minneapolis: Walker Art Center, and St. Paul: Film in the Cities, 1981); Leger Grindon, 'Significance Reexamnined: A Report on Bruce Conner,' *Post Script: Essays in Film and the Humanities* 2 (Winter 1985), pp. 32-44; and Bruce Jenkins, Joan Rothfuss, and Peter Boswell, *2000 BC: The Bruce Conner Story, Part II* (Minneapolis: Walker Art Center, 1999).
17. On Douglas's work see, among others, Daniel Birnbaum, 'Daily Double: The Art of Stan Douglas,' *Artforum International*, XXXVIII, no. 5 (January 2000), pp. 90-95; Daina Aligaitis, ed., *Stan Douglas* (Vancouver: Vancouver Art Gallery, 1999) (exhibition catalogue); Scott Watson, Diana Thater, and Carol J. Clover, *Stan Douglas* (London: Phaidon, 1998); Bill Horrigan, 'Taxing Memories,' *Art & Text* 60 (February-April 1998), pp. 72-77; *Stan Douglas* (Paris: Centre Georges Pompidou, 1993) (exhibition catalogue); and *Stan Douglas: Monodramas and Loops* (Vancouver: UBC Fine Arts Gallery, 1992) (exhibition catalogue).
18. Kerry Brougher, 'Hall of Mirrors,' in Russell Ferguson, ed., *Art and Film since 1945: Hall of Mirrors* (New York: Monacelli Press, and Los Angeles: Museum of Contemporary Art, 1996), p. 137. On this subject, see also *A.D. Art and Design* 49 (1996) special issue 'Art and Film.'
19. 'Spellbound: Art and Film' was held in London at the Hayward Gallery, February 1996. See Philip Dodd and Ian Christie, eds., *Spellbound: Art and Film* (London: British Film Institute and Hayward Gallery, 1996) (exhibition catalogue).
20. *Silent Movie* was commissioned for cinema's centennial celebration by the Wexner Center for the Arts, in Columbus, Ohio. It was subsequently shown at the Museum of Modern Art, in New York, as part of the show 'Video Spaces: Eight Installations,' 22 June-12 September 1995. See *Chris Marker: Silent Movie* (Columbus, Ohio: Wexner Center for the Arts, 1995) (exhibition catalogue); Molly Nesbit, 'Chris Marker (*Silent Movie*),' *Artforum International* XXIV (April 1996), pp. 96-97.

21. On Gordon's work see, among others, Douglas Gordon, *Douglas Gordon: Blackspot* (Liverpool: Tate Publishing, 2000); Stan Douglas, *Double Vision: Stan Douglas and Douglas Gordon* (New York: Dia Center for the Arts, 2000) (exhibition catalogue); Amy Taubin, 'Douglas Gordon,' in Dodd and Christie, eds., *Spellbound*; Michael Newman, 'Beyond the Lost Object: From Sculpture to Film and Video,' *Art Press* 202 (May 1995), pp. 45-50; and Andrew Renton, '24 Hour Psycho,' *Flash Art* 26, no. 172 (November-December 1993).
22. For an analysis of this film in the context of a theorization of filmic *flânerie*, see Giuliana Bruno, *Streetwalking on a Ruined Map* (Princeton, N.J.: Princeton University Press, 1993), especially chapters three and four. Since the print of *La neuropatologia* preserved at the film archive of the Museo del Cinema in Turin is too damaged to circulate, I was glad to see a museum space provide a public 'archival' offering when *Hysterical* was presented as part of an exhibition associated with the Hugo Boss Prize 1998 at the Guggenheim Museum SoHo, 24 June-20 September 1998, and was the prize winner.
23. Mario Dall'Olio, 'La neuropatologia al cinematografo,' *La gazzetta di Torino*, Turin, 18 February 1908.
24. On the moving images placed on revolving wheels by the Catalán poet and mystic Ramon Lull, see Frances A. Yates, *The Art of Memory* (Chicago: University of Chicago Press, 1966), especially chapter eight; and Paolo Rossi, *Clavis Universalis: Arti mnemoniche e logica combinatoria da Lullo a Leibniz* (Milan: Riccardi, 1960).
25. See Rosanna Albertini's interview with the artist in 'Bill Viola: the Dividing Line,' *Art Press* 233 (March 1998), pp. 20-25; and *Bill Viola* (Paris: Flammarion, and New York: Whitney Museum of American Art, 1998) (exhibition catalogue).
26. On Neshat's installations see, among others, Bill Horrigan, 'A Double Tour,' in *Shirin Neshat: Two Installations* (Columbus: Wexner Center for the Arts and Ohio State University, 2000) (exhibition catalogue); Arthur Danto, 'Pas de Deux, en Masse, Shirin Neshat's *Rapture*,' *The Nation* 28 (June 1999), pp. 33-36; and Leslie Cahmi, 'Lifting the Veil,' *Art News* 99, no. 2 (February 2000), pp. 148-51.
27. On filmic site-seeing, see Giuliana Bruno, 'Site-Seeing: Architecture and the Moving Image,' *Wide Angle*, IXX, no. 4 (October 1997), pp. 8-24.
28. The museographic archealogy of cinema and cinematic affective'transport' are treated further in my *Atlas of Emotion: Journeys in Art, Architecture, and Film* (New York: Verso, 2002).
29. On this exhibitionary culture, see Patricia Mainardi, *The End of the Salon: Art and The State in The Early Third Republic* (New York: Cambridge University Press, 1993).
30. Sergei M. Eisenstein, 'Montage and Architecture' (c. 1937), *Assemblage* 10 (1989), with an introduction by Yve-Alain Bois, pp. 111-31.
31. Ibid., p. 116.
32. Eisenstein, 'El Greco y el cine' (1937-41), in *Cinématisme: Peinture et cinéma*, ed. François Albera, trans. Anne Zouboff (Brussels: Editions complexe, 1980), pp. 16-17.
33. Marcus Tullius Cicero's version of the art of memory is outlined in his *De Oratore*, trans. E. W. Sutton and Harris Rackman (London: Loeb Classical Library, 1942). Marcus Fabius Quintilian's rendition of the subject is laid out in his *Institutio oratoria*, vol. 4, trans. H. E. Butler (New York: G. P. Putnam's Sons, 1922).
34. Quintilian, *Institutio oratoria*, vol. 4, pp. 221-23.

35. See Yates, *The Art of Memory*; and Yates, 'Architecture and the Art of Memory,' *Architectural Design* XXXVIII, no. 12 (December 1968), pp. 573-78.
36. See Plato, *Theaetetus*, trans. Harold N. Fowler (London: Loeb Classical Library, 1921); and Sigmund Freud, 'A Note on the Mystic Writing Pad,' in *Complete Psychological Works*, vol. 9 (London: Standard Edition, 1956).
37. Raúl Ruiz, 'Miroirs du cinéma,' *Parachute* 67 (Summer 1992), p. 18.
38. Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (New York: Cambridge University Press, 1992), pp. 59-60.
39. See Giulio Camillo, *L'idea del teatro*, ed. Lina Bolzoni (Palermo: Sellerio, 1991).
40. Erasmus, *Epistolae*, ed. P. S. Allen, et al., vol. 9, p. 479. Cited in Yates, *The Art of Memory*, p. 132.
41. See, in particular, Giordano Bruno, *L'arte della memoria: le ombre delle idee* (Milan: Mimesis, 1996). On Bruno's work, see Frances A. Yates, *Giordano Bruno and the Hermetic Tradition* (Chicago: University of Chicago Press, 1964).
42. See Barbara Maria Stafford, *Voyage into Substance* (Cambridge, Mass.: MIT Press, 1984), p. 4. See also Hohn Dixon Hunt, *Gardens and the Picturesque* (Cambridge, Mass.: MIT Press, 1992).
43. Christopher Hussey, *The Picturesque: Studies in a Point of View* (London and New York, 1927), p. 4.
44. On Choisy and Le Corbusier, see Richard A. Etlin, 'Le Corbusier, Choisy, and French Hellenism: The Search for a New Architecture,' *Art Bulletin* 2 (June 1987), pp. 264-78. On Eisenstein and architectural history, see Yve-Alain Bois's introduction to Eisenstein's 'Montage and Architecture'; and Anthony Vidler, 'The Explosion of Space: Architecture and the Filmic Imaginary,' in Richard Neumann, ed., *Film Architecture: Set Designs from Metropolis to Blade Runner* (New York: Prestel, 1996).
45. This interview, the only one that Le Corbusier gave during his stay in Moscow in 1928, is cited in Jean-Louis Cohen, *Le Corbusier and the Mystique of the USSR*, trans. Kenneth Hylton (Princeton, N.J.: Princeton University Press, 1992), p. 49.
46. Eisenstein, 'Montage and Architecture,' p. 120.
47. Le Corbusier and Pierre Jeanneret, *Oeuvre complète*, vol. 1, ed. Willi Boesiger (Zurich: Editions Girsberger, 1964), p. 60.
48. See Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass.: MIT Press, 1994).
49. Le Corbusier, *Oeuvre complète*, vol. 2, p. 24.
50. On new museum architecture, see Victoria Newhouse, *Towards a New Museum* (New York: Monacelli Press, 1998).
51. See Walter Benjamin, *One Way Street and Other Writings*, trans. Edmund Jephcott and Kingsley Shorter (London: Verso, 1985), p. 295.
52. Libeskind's statement is cited in Michael W. Blumenthal, ed., *Jewish Museum Berlin*, G + B Arts International, 1999, p. 41. See also Daniel Libeskind, 'Between the Lines,' *A.D., Architectural Design* 67, nos. 9-10 (September-October 1997), pp. 58-63.
53. This building was designed over the period 1981-87.
54. On the notion of the fold, see Gilles Deleuze, *The Fold: Leibniz and the Baroque* (Minneapolis: University of Minnesota Press, 1993).

55. Frank Gehry, interviewed by Michael Sorkin, in 'Beyond Bilbao,' *Harper's Bazaar* (December 1998), p. 261.
56. *Minute Museum* is a project developed as Hani Rashid's 'Paperless Studio' at Columbia University's School of Architecture. It was exhibited at the Storefront for Art and Architecture, New York, 12 December 1998, a gallery featuring a cut-out facade designed by Vito Acconci and Steven Holl.
57. See Judith Barry, *Projections: Mise en abyme* (Vancouver: Presentation House Gallery, 1997) (exhibition catalogue); Barry, 'The Work of the Forest,' *Art and Text*, 42 (May 1992), pp. 69-75; Barry, *Public Fantasy* (London: ICA, 1991); Barry, *Ars Memoriae Carnegiensis: A Memory Theatre* (Pittsburgh: Carnegie Museum of Art, 1991) (exhibition catalogue); Barry, 'Casual Imagination,' in Brian Wallis, ed., *Blasted Allegories* (Cambridge, Mass.: MIT Press, 1987); and Barry, 'Dissenting Spaces,' in Greenberg, et al., *Thinking about Exhibitions*, which discusses El Lissitzky's 1920s wish for spectatorial, even tactile, agency in the design of the museum gallery.
58. On the museum and the shop, see in particular Chantal Georgel, 'The Museum as Metaphor in Nineteenth-Century France,' in Scherman and Cogoff, eds., *Museum Culture*; Erin Mackie, 'Fashion in the Museum: An Eighteenth-Century Project,' in Deborah Fausch, Paulette Singley, Rodolphe el-Khoury, and Zvi Efrat, eds., *Architecture: In Fashion* (Princeton, N.J.: Princeton Architectural Press, 1994). On the department store and cinema's virtual gaze, see Anne Friedberg, *Window-Shopping: Cinema and the Postmodern* (Berkeley: University of California Press, 1993). On mass culture and the museum see also Vanessa R. Schwartz, *Spectacular Realities: Early Mass Culture in Fin-de-Siècle Paris* (Berkeley: University of California Press, 1998). For the way in which the theatrics of display is bound up with ethnographic practice, see Alison Griffiths, '"Journeys for Those Who Can Not Travel": Promenade Cinema and the Museum Life Group,' in *Wide Angle* XVI, no. 3 (July 1996), special issue 'Movies Before Cinema: Part II,' ed. Scott MacDonald, pp. 53-84.
59. On this subject, see Gottfried Semper, 'Style in the Technical and Tectonic Arts or Practical Aesthetics' (1860), in *The Four Elements of Architecture and Other Writings*, trans. Harry Francis Mallgrave and Wolfgang Hermmann (Cambridge: Cambridge University Press, 1989).
60. See Pierre Bourdieu, *Distinction: A Social Critique of the Judgment of Taste* (Cambridge, Mass.: MIT Press, 1984).
61. Benjamin, *One Way Street*, p. 314.
62. André Malraux, *Museum Without Walls*, trans. Stuart Gilbert and Francis Price (New York: Doubleday, 1967).
63. Denis Hollier, 'Premises, Premises: Sketches in Remembrance of a Recent Graphic Turn in French Thought,' in *Premises: Invested Spaces in Visual Arts, Architecture and Design From France: 1958-1998* (New York: Guggenheim Museum, 1998) (exhibition catalogue), p. 64.
64. See Rosalind E. Krauss, 'Postmodernism's Museum Without Walls,' in Greenberg, et al., *Thinking about Exhibitions*, especially pp. 345-46. On the subject of Malraux's *musée imaginaire*, see also Douglas Crimp, 'On the Museum's Ruins,' in Hal Foster, ed., *The Anti-Aesthetic: Essays on Postmodern Culture* (Port Townsend, N.Y.: Bay Press, 1983).

65. Stephen Greenblatt, 'Resonance and Wonder,' in Karp and Lavine, eds., *Exhibiting Cultures*.
66. Andreas Huyssen, 'Escape from Amnesia: The Museum as Mass Medium,' in *Twighlight Memories: Marking Time in a Culture of Amnesia* (New York: Routledge, 1995), p. 15.
67. On the force of rituals and psychic dramas enacted in the museum setting, see Carol Duncan, 'Art Museum and the Ritual of Citizenship,' in Karp and Lavine, eds., *Exhibiting Cultures*; and Duncan, *The Aesthetics of Power: Essays in Critical Art History* (Cambridge: Cambridge University Press, 1993).
68. Pierre Nora, 'Between Memory and History: *Les Lieux de Mémoire*,' *Representations* 26 (Spring 1989), pp. 12-13.
69. Aby Warburg, 'Introduzione all'Atlante *Mnemosyne*' (1929), in *Mnemosyne. L'Atlante della memoria di Aby Warburg*, ed. Italo Spinelli and Roberto Venuti (Rome: Artemide Edizioni, 1998), p. 38 (my translation).
70. Ibid., pp. 38, 40, 42.
71. Ibid., p. 43.
72. Alfonso Frisiani so describes the daguerreotype's potential future in the *Gazzetta privilegiata di Milano*, 3 December 1838. As cited in Giuliana Scimé, *On Paper*, January-February 1997, p. 28.
73. For an introduction to this term, see Yi-Fu Tuan, *Topophilia: A Study of Environmental Perception, Attitudes, and Values* (New York: Columbia University Press, 1990). Although I have found inspiration in this work, I have developed the notion of topophilia along a different path.
74. See Simon Schama, *Landscape and Memory* (New York: Vintage Books, 1995).
75. On Cardiff's work see, in particular, Sylvie Fortin, 'Journeys Through Memory Gardens and Other Impossible Homecomings,' in *La Ville, le Jardin, la Mémoire* (Rome: Académie de France, 1998) (exhibition catalogue); and Rochelle Steiner, ed., *Wonderland* (Saint Louis: Saint Louis Art Museum, 2000) (exhibition catalogue), which contains further bibliographical references.
76. For example, in the history of landscape, the sea and the seashore have functioned as lures. See Alain Corbin, *The Lure of the Sea: The Discovery of the Seaside 1750-1840*, trans. Jocelyn Phelps (London: Penguin Books, 1994).
77. See *Doris Salcedo* (New York: New Museum of Contemporary Art, 1998) (exhibition catalogue).
78. Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston: Beacon Press, 1969), pp. 10, 62.
79. Xavier de Maistre, *Voyage around My Room*, trans. Stephen Sartarelli (New York: New Direction Books, 1994).

Afterward: A Matter of Time

Analog Versus Digital, the Perennial Question of Shifting Technology and Its Implications for an Experimental Filmmaker's Odyssey

Babette Mangolte

In the South of France, some fifteen kilometers east of Avignon, in the summer 1970

It is a warm evening under a sky shining with stars on a terrace, with the smell of laurel trees overpowering lavender and thyme. The cicadas have stopped at sunset and in the quiet of the night the only noises now are the crickets and the croaks of some small green frogs in the irrigation ditches in the cantaloupe fields. I look at the sky but my mind is elsewhere, enchanted by what I am hearing about a film with an intriguing title about the distance of a wave. I am left puzzled by what I am told, a marvelous account of a complex time machine and philosophical toy. I am also curious to understand how one person can be so utterly fascinated by what somebody else has previously described to me as the most boring film ever made in which nothing happens, and it takes forty-five minutes to do so.[1] How can something be an aesthetic revolution for one person and a negligible, inconsequential occurrence for another? That summer day I decided that I had to see it for myself, even if it meant traveling to New York City where the film was shot. (That would be my first airplane trip, my first of many other things as well.) I felt in love that night under the stars with the idea of understanding the complexity of the world and the seeming impossibility of satisfying the compulsion to solve contradictions. I also felt in love with the romantic urge to chart new territory.

Time has long passed since you could think there was a choice to be made between digital and analog, between pixel and silver-based. Of course you can still shoot in black and white film, but in the mind of almost everyone, film is now color, and it is digital. The image is now a bitmap made of pixels, and the grains of the silver image of the past can be added on with a simple aftereffect algorithm. Even when generated first by a film camera and not by a digital

camera, and viewed principally in the form of a film print, the interaction of digital and film is everywhere inscribed in filmmaking processes today, in cinematography as well as editing and scoring. This constant interaction and transfer of analog to digital and vice versa is changing the relation the filmmaker has with his tools. Do the tools he uses affect the filmmaker's subjectivity? Obviously they do, and the films made now reflect these new tools. In this change, what have we filmmakers gained, and what have we lost? And is it a question of gain or loss? Or is it that the new technologies and market forces that shape what the future holds for us constitute an historical change that other forces try to reverse?

If the replacement of analog by digital isn't a matter of time anymore, time is still at the heart of the difference between the two. For a filmmaker, you could say that time is of the essence and is everywhere inscribed into film in a complex and metaphorical manner. Time is appended with an adjective and to name a few, filmmakers speak of running time, screen time, performance time, shooting time, real time, and a sense of time. All those times converge 'as a construction' through editing or as time regained through allusions to the past or future via flashback and flash-forward, without forgetting the 'times' displayed or alluded to in the narrative and the visual and aural editing choices. Basically, a filmmaker constructs a 'sense of time' and a 'sense of space' in every film. The two are inextricably intertwined and meshed into the fabric of film itself, its projected images and playback sounds.

The filmmaker alludes to and juggles all these times while thinking about and making his or her film.[2] The filmmaker thinks in fragments that add up to and create time. The fragments are the shots and the addition of all the shots is the editing. But during the shooting, time collapses into duration and is visualized through images of spaces. So the margins between time, space, and duration are blurred.

Furthermore, although the filmmaker constantly counts time, measuring every shooting day, every few feet of film exposed, the seconds and minutes of possible screen time versus the running time of every shot, the result of all this counting is a film that does not necessarily produce an experience of time for the spectator. On the contrary, we often assume that a film is good because we lose track of time and are surprised on leaving the movie theater that two hours have passed. Although film is time-based, it is not always received as time-passing but rather as time-forgotten.

Everything in film seems to be about time, including the camera apparatus defined by its frame-per-second speed. And we know that among the first filmmakers, Georges Méliès had great fun with tricks as early as 1900 that subverted the ability of the camera to reproduce real time, taking pleasure in playing with accelerated time or slowed down time. Certainly for Dziga Vertov in

Man with a Movie Camera (1929) the camera was a time machine, as it was for René Clair in Paris qui dort (1925). This fascination with camera speed effects is very much alive now. We see it in Hong Kong cinema and Hollywood action films. But are spectators able to see such motion effects as an experience of time? I doubt it.

I know of two films that have succeeded in creating a time experience for the viewer by collapsing time as space and time as movement. The two films are Wavelength (Michael Snow, 1967) and 2001 (Stanley Kubrick, 1968). In Wavelength, the propelling forward movement of a continuous and relentless zoom is combined with constant changes in camera stocks and color filters, creating a disruption of the forward movement seen as relentless as the sound wave on the soundtrack.[3] Time is both progressive and made of stop motion, like the motion picture film that is made of successive photograms. The separation of each photogram during projection is enabled by the closing of the shutter, permitting the shift from the current photogram to the next.

Using digital rather than analog tools does not change any of the counting of various times during production. But I think it changes the end result at the time of projection. For the viewer, even if a film isn't creating an experiential sense of time, it can evoke it, but the digital film is at a disadvantage in this regard.

Why is the brightness of the LCD screen, the relentless glare of the digital image with no shutter reprieve, no back and forth between one forty-eighth of a second of dark followed by one forty-eighth of a second of projected image, with no repetitive pattern as regular as your own heartbeat, unable to establish and construct an experiential sense of time passing? And why could the projected film image do it so effortlessly in the past and still can? Is it because every projected film frame or photogram is separated by black and therefore can be counted?

Why is it difficult for a digital image to communicate duration? Like most filmmakers, I am intimately convinced that new technologies are a source of opportunity, and I feel betrayed by this limitation of digital. I very much want the passage to digital to be all gain and no loss. But I notice a loss when I compare a film projected as a film, in particular films that deal with time and duration, and the same film projected from a DVD instead of a film print. Somehow, neither Andrei Tarkovsky's Mirror (1975), Alain Resnais's Last Year at Marienbad (1961), nor Kubrick's 2001 work very well unless you see them on film in a movie theater – and preferably in 35mm or 70mm if you can.[4] And most underground films do not work either. Certainly flicker films like the ones of Paul Sharits, or the quick refocus and reframing by Stan Brakhage, don't work well in video viewing; neither do most of Andy Warhol's films, including The Chelsea Girls (1967). Immediately you think it is because of the

precision provided by a much more detailed film image. But maybe this isn't all that matters to create a percept (Deleuze's definition of a work of art).[5]

At the core of the difference between silver-based film and digital is the absence of the shutter. No more flicker. No more heartbeat. The persistence of vision isn't called to the rescue to make possible the reproduction of movement using photograms. Film is made of still photographs after all. But the digital film is not. Underneath there is a grid of pixel-size slots, and it is fixed. Somehow the pixel makes what you see an icon; it is graphic and not sensorial.

In those experiential films, time is inscribed in the emulsion grain, which constantly trades places and spaces from one frame to the next. The grain became to the experimental filmmaker of the late '60s what feathers and lipstick were to Jack Smith, an endless source of fascination and performance hubris. But what this shifting grain creates is the constant reminder of a change from the preceding frame, reinforcing the demonstration of time passing.

In the world of digital, time is encoded in a bit-map, and there can be no entropy. In the compression algorithm of a digital image, only what changes in the shot is renewed. That which is the same in the shot stays the same in the digital image, in contrast to the constantly changing emulsion grain from one frame to the next in the film image. The inscription of the decaying body in Wavelength is therefore not possible in digital, even in HD DIGI.[6] Time is not transformation anymore, the essence of film in which there is a change twenty-four times a second. Now time is geography and is inscribed in layers on a set screen with bit-size slots. When you dig into these bit-size slots to see what is there, you find bits of time memory one on top of the other without chronology. You travel through time now by traveling through layers of pixels. And the space is totally in front of you without shadow. It would be optimistic to say that you are traveling in your memory in the way that you move through Son Nom de Venise dans Calcutta Desert (Marguerite Duras, 1975).[7]

Time is fixed as in a map in digital and is totally repeatable with no degradation due to copying loss, while silver-based film is structured by time as entropy, therefore unrepeatable. The unpredictability of time passing and time past, the slippage between one and the other, and the pathos of their essentially ineluctable difference are lost.

> On my arrival in New York City, I find myself in the middle of the night. Everything I see is dirty, and I can't find a pay phone that works. The names of subway stations, which can bear the same name, such as 42nd Street, but be in three different locations blocks apart, mystifies me. What happened to the idea of international standards and clarity? Descartes is far away. I feel like I am in the middle of a Third World country, and I don't speak English. I have doubts about why I am here. But two days after my arrival in late October 1970, I am invited to a private screening of a new film titled Eyes. I discover what an 'untutored eye' can see and do.[8] The film

> is about police work in Pittsburgh. Later I will know that it is part of Stan Brakhage's Pittsburgh Trilogy. My eyes are wide open; my mind suddenly jolted by the absence of moderation and common sense shown by the cinematographer whom I discover is also the filmmaker. This film, my first experience of a Brakhage film, is going to revolutionize my conception of cinematography and change my life like the conversation about WAVELENGTH and Michael Snow had done some months earlier.

I encountered high-definition video in the prehistoric age before it turned digital. I was a visitor on the set of Zbigniev Rybczynski's music video in 1986, when he was shooting John Lennon's IMAGINE and an ironic homage to Eisenstein's 'Odessa Steps' sequence.[9] The whole preoccupation of the technical crew was with the sharpness of the image received by a monitor on which you could see the image shot by the prototype Sony high-definition video camera. It had come straight from Japan where the videotape would be shipped back to be printed on 35mm film once production was completed. The lines of the high-definition monitor were not as fine as the thickest of grains in a 35mm film, and what appeared perfectly sharp on the monitor screen could be 'blown up' to 35mm but only as a softer image. Later I was invited to the private screening of the 35mm print, and indeed it was very strange to discover sharpness and softness in places you would not have expected if the image had been obtained with a film emulsion rather than an electronic recording. What was also troubling was the lack of depth of field; somehow it was sharp or soft with no gradation in between. Because the market for this expensive experiment was the music channel MTV, most viewers never saw the print version, and when shown in the reduction of TV NTSC broadcast viewing the sharpness issue became irrelevant.

In many ways, all this was repeated with the first all-digital feature cartoons such as TOY STORY (1995), made for theatrical release and shown in 35mm. This time what was funny was the total sharpness of the field of vision with no receding areas of softness or out-of-focus blur. This limitation has been vanquished in more recent cartoon feature films in which even chiaroscuro techniques have been mimicked successfully. You can manufacture softness in digital, but if you look carefully it appears fake because it has the same hard edges that sharpness has.[10] The outline of the pixel is always there underneath the softness or the sharpness.

In my own experience with shooting a digital image, the first thing I discovered that I like is the extreme sharpness and pristine quality of the edges, but here I am in a minority as most filmmakers, instead of embracing this, use a change in the shutter speed available in the digital camera menu to obtain what the cinematographer calls a 'film look,' a blurring around the edges specifically in shots with quick movement. This re-establishes the limitation of the reproduction of movement caused by the shutter opening that is seen in many

films, for instance in close-ups of a fast moving wheel of a stagecoach ready to spin out of its axle.

I don't quite know why I am so attracted to the clarity and lack of mystery of a sharp image. It seems that sharpness could prevent one from 'freeing the mind from its desire to concentrate.'[11] Freeing the mind is one of the objectives of the films I have mentioned and that I so dearly love because they attempt to liberate the audience from routine and prejudice. Yet I have never felt that sharpness contradicts the possibility of a drift. Drifting to free your mind seems to be so much part of the processes of the white screen in the black box, the *dispositif* dear to Roland Barthes.[12] But you need the time to wander (I would like to use the French word *'flâner,'* meaning, 'idle stroll' – another spatial metaphor about the mind). With film, was this freedom to wander acquired through 'real time' in opposition to 'screen time'? The difference between 'real' and 'screen' is not clear in digital viewing, that much is certain. Furthermore, the brightness[13] of the digital image is a deterrent to concentration. But that deterrent doesn't free the mind. It only makes it more restless.

One Saturday afternoon at the Millennium, in late December 1970

Paul Sharits is slowly and systematically using a box cutter and a ruler to scratch his film to be screened later that evening. I am there looking at the application of the razor-sharp instrument used for the task in Paul's expert hands. I don't touch the film that Paul is scratching with great excitement. There is more than 1,200 feet to scratch, and it is going to take several hours. Paul is the one touching the film surface forcefully and rewinding with caution the film already scratched in order to be ready to work on the next section. I am mystified by the idea that a scratch can add rather than take away. I am waiting to see the result of Paul's efforts. The film is going to be projected later that evening at 8 p.m. Meanwhile, Paul is happy that my attentive eyes are looking at what he does. Everything for me is about the projected image. At heart I want to be a spectator and look. Later, the film will be titled S:S:S:S. or S:TREAM:S:S:ECTION: S:ECTION:S:S:ECTIONED.

The first thing you remember about cutting film is the feel and the touch of film emulsion in your hands, the weight of a roll of film as you put it on the flatbed or thread the projector. The weight of the film and the size of the roll on the plate of the flatbed told you how long it was. About so many feet or six minutes, you thought. You constantly had to shuffle the film from the gate, where you marked with your grease pencil the first frame to cut out, to your splicer, where you accessed this frame to execute the cut and do the splicing. All the time you were doing that little shuffle, you were thinking about that cut, standing up most of the time dancing around your cut.[14]

Certainly the mental processes are different when you can execute a cut by the flick of a wrist movement touching your mouse. Also, you can undo what you have done so quickly that at first you just try without thinking deeply as to where else you could cut. You would rather react once it is done and see how it looks or sounds. You can also keep an edit list of that choice and go on to execute another choice, then compare them both. You can delay the editorial decisions around one cut before going on to the next cut. And these variations are executed in record time as well, but you know that your mental speed has not been increased with the acquisition of the new tool of digital editing. Besides, you feel less engaged in the one cut. In digital non-linear editing software, you just try it out at first. Are you gaining a sense of experimentation while trying it out? Maybe, but it is a big maybe, for you may accumulate only indecisions. There are no consequences of not thinking it through because you can simply undo it if it doesn't work. In computer editing, you can get by with a one-cut decision strategy rather than a scene strategy.

I see digital editing as checkers and film editing as chess. One needs a very long-term strategy before the first move while the other is reactive to one move.

How do you make decisions and implement them when the cut is the result of manual handling in which touch and sight are what counts? Is this why perception was the main theme of movies edited on flatbeds with 'real' film some decades ago, and why perception seems obsolete in current practice and has been replaced by texture, surfaces, reflections, and moiré effects? Why is it that in the new digital kingdom it is so difficult to find a sense of tempo so dear to filmmakers as different as Hitchcock and Bresson?

Some films made using digital editing by editors trained by many years of film cutting still maintain a film sensitivity to tempo (an observation made by Walter Murch and echoed by all the film editors I know who first cut on film, now cut on AVID, and are very sure that they don't want to go back to film cutting). But increasingly, young editors are not trained in film, and the editing has no tempo. Is this because in the manipulation of a digital file for each shot the time is difficult to 'see'? Unlike the size of a film roll, the duration marked by the time code of a digital file can be displayed at various scales that you can change quickly and modify, but you also need to check to really know if what you are cutting is two seconds or twenty. In film, two seconds is three feet and twenty seconds is thirty feet. There is no way to ignore duration when you physically manipulate the piece of film. Nothing like this exists in digital editing. Most commercial films now are too long and have no sense of ellipsis. Is this because of the editor's tool, which complicates the intellectual activity of inventing ellipsis, or something else? Is it the rhythm so dear to Hitchcock and

Bresson that is missing and hard to recapture in a digital non-linear editing system?

Once you have started cutting on a non-linear system you don't want to go back. You feel that most of what was the drudgery of sorting out film trims, and cleaning up is over. It is so fast, and you can do so much more in sound and in building tracks. You feel empowered but also lost in the endless list of dubious names in your browser windows[15] and the fact that you can't open two clips at the same time. You could have stored the same clip under different names, which doesn't simplify your task. Altogether the computer frustrates you when the physicality of film cutting saddled you with the menial task of filling trims and shuffling films, which made you bored. Is it that boredom is more stimulating intellectually than frustration?

No weight, no trims, no out-takes, nothing to file or to keep track of. Just naming your clips when you build your sequence is the big thing. The endless lists of browser clips are retrieved because of your filing system and your naming them in a coherent manner. Now the words used for those file names are like shots in a Bresson movie. They contaminate each other; they are pliable to transformation. They shift and stop signifying what you thought they did when you started. The naming is muddy, fuzzy, not clear. There is no way to identify by the feel, the length of the film clip neatly wound on a core. Furthermore, because you read first and see second, there are few unexpected rediscoveries of a forgotten shot suddenly brought back to your attention because of its proximity on the roll to what you are looking for. The computer retrieval system prevents the unexpected collapse and collusion of shots. Now words are structuring your edit rather than the image in its collusion with another image.

I am left dreaming about the photo of Elizaveta Svilova, the editor in Man with a Movie Camera, with the neat row of film rolls hanging against the light box, where she could physically compare one photogram to the next.

> I am sick in a hospital in California far from home recuperating from a ten-hour surgery and friends bring me a Betamax machine and some tapes of freshly released 16mm prints that they have 'film chained' for me.[16] The copying is illegal, but what will you not do for a sick friend? We are in 1983, and nobody yet thinks that the VCR could seriously encourage copyright infringement. I am amazed. Now you can collect films on tapes like you do books, I think. I am at heart a collector of footage, of images and sounds, and to have this versatile tool at your disposal and at a low cost seems like a wonderful step forward. I am old enough now to not necessarily believe in progress. We are in the early '80s, and the world is a somber place for artists, and the future is bleak. The smell of the hospital is all around me but the image on the TV-turned-monitor for the Sony Betamax machine patched to it is comforting and reflects what I feel is a new hope. Finally a tool to learn film history

> that was not there before, and indeed more films will be archived and saved because of it. Later Betamax will disappear, and VHS will be everywhere, becoming the privileged form of movie viewing for the average American. I will feel that VHS is a poor substitute for theatrical release and even kills some films that do not sustain the transcription from a projected image to a degraded VHS image (without mentioning the cropped framing).

It will take me ten years to understand that the drama of the gaze is dismantled and evacuated in the collapse of the black box and the passage to the ambient light viewing of VHS and now DVD in the living-room. Films are now 'rides' telling us about sensations rather than making us experience them directly as in 2001.

> Times have been hard, and I am now an academic in California. I feel that I have to keep abreast of new technological developments. I learn programming and discover that the same simple computer language, such as C, can perform amazingly disparate tasks, such as creating a matching-color machine, a meaningless language that English speakers can pronounce, a game scoring various players' speeds, a prognostic tool for cell cultures according to different parameters, and much more. In other words, you can graphically display all sorts of algorithms. A computer can be used to represent and more. It is 1990, and optimism is again knocking at my door. I am looking at my own backyard and I make a film inspired by Italo Calvino and my great friend Georges Perec.

In the digital revolution there are two leaps of faith: the first is about the differences between silver-based and pixel images; the other concerns how the rational and systematic approach to digital editing, and the removal of the large screen as the standard, are transforming matters such as tempo and pacing without thinking of faint but important expressive differences on an actor's face.[17] The tools push you in unexpected directions. They force you to rationalize the editorial process. Film is about emotion and not logic, so in many ways you feel you have to go against the grain of the digital tool you are using. It is not a pleasant situation. You would rather let yourself go.

The main question is how can you invent the new compositional values that these new tools could suscitate in the same way Eisenstein and Vertov invented 'montage' with a light box, a pair of scissors, and some glue?

The aesthetics of the Structuralist film were shaped by a sensitivity to the tool and the way it models the result. Can one therefore assume that other tools will create other aesthetics? I wish we could make this third leap of faith with digital. It is a question of faith. But who can have faith in software designed by engineers and not by artists? Digital camera menu software is not like the Lumière film camera, which is neutral, just a recorder of what is in front of it. The software engineer makes guesses about how a program will be commonly

used, and these guesses determine the ways the program executes its tasks, which the creative mind bent on tweaking clichés is not necessarily bound to pick. The same limitation applies to non-linear editing system softwares.

The tools are not only what seems to be limiting. The image itself as well as the sound lack extremes. No more extremes of overexposure and underexposure, no more true black, nothing as bright as the sun in the middle of a film frame, no sound piercing your ears ever again. Altogether what has been gained is a better fidelity to sound reproduction, a more orchestrated sound design, and the possibility of surround sound even in small budget films. But the image has lost its power to convince.

> I go to the first demonstration of a new software, Final Cut Pro, at the American Film Institute in Los Angeles. People predict that it will compete with AVID and other professional non-linear editing tools. It is only a little more than two years ago, in the spring 1999.

I buy my first digital camera and start to shoot my first digital film. I am not sure I ever want to go back to film cutting, but for sure I want to go back to film shooting if I can. I feel that digital cinematography is as different from silver-based film cinematography as photography is. You think differently. First, you are very aware of the sounds you are recording concurrently with the image. You also know that the image has finally lost its primacy over the sound (since the 1970s, you could say). And you are ready to explore those surface effects, the auto-focus function, the extreme close-ups with audacious floating camera moves, and all those other automatisms waiting to be discovered in your camera menu. The digital camera is a new tool as different from the motion picture camera as the still camera is. It requires a very different type of concentration for the cameraperson. You are involved in following rather than looking. The recording of the sound has to be maintained, so you prevent yourself from thinking about shots. You refuse to turn the camera off but think in terms of sequences of long duration of unbroken time and unbroken sound. The irony is that if you continue with this strategy, you end up with unmanageable footage that cannot be edited together except by jump cuts, aggravating the lack of tension and tempo of most recent cinema.

The opposition between continuity and discontinuity structures all traditional filmmaking and should do so for digital film as well, but the dual responsibility for sound and image placed on the lone operator of the only machine used to record both is a burden that is especially hard on the independent filmmaker, who often has to do it all.[18] In the past, with my movie camera, I shot the image first, and often recorded the sound at a very different time, and certainly with a different machine. The two were almost totally separate even when shooting synchronized dialogue scenes. The separation of sound and

image, and the treatment of the two in counterpoint fashion, thereby creating the possibility of discontinuity, is a key difference between digital and analog shooting practices. It is not a minute difference. Once your mind is solely focused on sounds, you are much freer to find associative moments and interactions with the image than if you are recording both image and sound together. It takes an effort to disassociate what is automatically synchronized with a digital camera. Although it is possible, the effort again goes against the grain of the equipment rather than with it. And obviously, using sound and image concurrently to express the same sensation totally affects the final project.[19] One literally reinforces the other rather than transforming it or subverting it.

In a loft in SoHo September 12, 2001

SoHo is south of 14th street in New York City, and the city is totally isolated from the boroughs. Downtown is sealed off and police barricades manned by the National Guard are everywhere. The world is suspended due to what went on yesterday. No newspaper delivery, no cars, stores closed, but fortunately there is electricity in the building, and we can look at cable and get on-line news. My friend and I look at the headlines of some French newspapers to know about the rest of the world. We spend the afternoon reading on-line as we want to understand what has happened, how it happened, and why. Some fifteen blocks south there is that heavy smoke and smell that made me flee my loft close to Ground Zero after the wind shifted this Wednesday afternoon. Now the smell is reaching us in SoHo. On the table a good dinner is ready to be eaten and a bottle of French wine, opened one hour ago, is now ready to be tasted. My friend proposes a toast: 'to the future!' We drink to it.

Yesterday, looking at the second tower collapsing after the first, you could not really believe what you were seeing. You had already seen collapsing skyscrapers in bad disaster movies in recent years. Was it a replay of the destruction of New York and the Chrysler building seen one recent summer? You felt disturbed by the realization that what you saw and smelled that day was possibly not real but was instead what is now called a 'virtual' image. Today you feel that if the slow decent into rubble, powdery gray ashes, and smoke of the towers evoke a known film image, the sounds created by the event are not a replay of already manufactured sounds. The woosh of the crowd horrified at the sight twice repeated of the collapse, the screams and the thud of the impact of bodies falling from high up were all unheard before. The sounds are now what you can't forget, including the silence that follows. One thing is certain. You do not want to look back. You want to look ahead. Maybe the digital camera is the tool for it.

For a filmmaker the only temporary conclusion ever is 'to the future,' a future that cannot look back, that has to project itself forward with total selflessness.

Notes

1. Wavelength (1967) was unavailable in France at the time, as were most other experimental films of the New York avant-garde. In Paris, some cognoscenti knew about the film because of its controversial first prize win at the Knokke le Zoute film festival where it had been shown in 1967 and where some French filmmakers had seen it.
2. On most shoots, there is one person in charge of actually measuring the timing of every shot so the director can somehow pre-visualize the time construction of the film while the film is being made. The name of this position is 'continuity person' or 'script person.'
3. Manny Farber wrote, 'Wavelength, a pure, tough, forty-five minutes that may become the *Birth of a Nation* in Underground Films, is a straightforward document of a room in which a dozen businesses have lived and gone bankrupt,' *Negative Space* (New York: Praeger, 1971), p. 250.
4. An interesting article by Stuart Klawans states that when released in 70mm, Kubrick's film was very successful, but when the film went to general release and was shown in 35mm, attendance dropped sharply (*New York Times*, 11 November, 2001). Klawans's argument is that the details in 70mm overwhelm the viewer, who is led by Kubrick into a series of disorienting experiences of weightlessness, like the floating pen: 'The original audience could sense itself hovering, floating, sometimes plunging into the endless depths of the concave Cinerama screen. The sensation was arguably the movie's theme.' Klawans rightly credits this argument to Annette Michelson's pioneering article, 'Bodies in Space: Films as Carnal Knowledge,' *Artforum* VII, no. 6 (February 1969), pp. 53-64.
5. In *L'abécédaire de Gilles Deleuze* (Pierre-André Boutang, 1996), Deleuze defines the work of art as testing ideas by creating new 'percepts' and 'affects' (see the entry 'I' as in 'Idea'). Deleuze defines a 'percept' as a complex fabric of perceptions and sensations that survives the person who experiences it. He also speaks of the artist's desire in creating a 'percept' to make it 'durable.'
6. This is the nickname for a high-definition digital video format that runs at 24 frames per second in NTSC and that supposedly compares favorably with the 35mm film image. The camera uses the same optics as Panavision film equipment, and the format is supposedly going to replace film in the next ten years, although some insiders are skeptical because the cost is very much higher than film and could remain so in the future. Georges Lucas has been testing this format for his next Star Wars chapter.

7. Son Nom de Venise dans Calcutta Desert (1975) is a film by Marguerite Duras in which she uses the soundtrack of her preceding film India Song (1974) but in combination with a totally new image made of continuous tracking shots of a deserted mansion, showing all the decay of neglect. The image is without the presence of bodies, while the soundtrack is pregnant with the sensuality of the voices from the first film in which you see all the languorous drifting of the leisure class in a hypothetical India from the '30s. Son Nom de Venise dans Calcutta Desert is notable for its recall of the seduction shown in India Song (1975), and the way its voices without representation create a sense of disincarnation and estrangement of the body.
8. Stan Brakhage writes of his camera as an 'untutored eye' in his *Metaphors on Vision, Film Culture* 30 (1963).
9. Another memorable music video by 'Zbig' was about fish floating in the middle of New York's Grand Central Station. High-definition video was used to simplify multiple exposures because the quality of the chromakey separation was very good, and the superimposition could be viewed live. You could superimpose more than forty exposures with little effort using various scales at every stage. The making of this layered image principally involved the ordering of layers, deciding which were going to come in front and obscure preceding layers in the background. It was also possible to move a part of the same layer from front to back, and all the fun had to do with how much you could show yourself to be a virtuoso with the layering processes.
10. Here I must respectfully disagree with my friend and colleague Lev Manovich, who speaks of the digitally manufactured image as having the potential to reach 'perfect photographic credibility.' Technically, he is right and photojournalism will not revert back to silver-based photography. The quality of the images of the Afghan war of 2001 shows that digital photography comes close to matching the atmospheric characteristics of the silver-based process. But cinematography is not photography. Also, the problem for me is that digital is too perfect, and this perfection distracts from its credibility. Besides, both credibility and perfection are 'culture' rather than 'nature.'
11. A memorable quotation from John Cage.
12. I am alluding to Roland Barthes's text about the movie theater as a black box.
13. Black in digital is always created with light. In digital, there is no pure black, and white is limited to the maximum of saturation at 100%, unlike film overexposure which is pure light. In digital, there is no way to overexpose or underexpose the image to obtain pure light or pitch black, as in analog cinematography. The equivalent is true in digital sound recording because of the impossibility of saturating loud sounds as you can in analog sound recording.
14. This is a wonderful image of the film cutter at work from Walter Murch's book *In the Blink of an Eye: A Perspective on Film Editing* (Los Angeles: Silman-James Press, 1995), pp. 44-45.
15. The browser window is where you 'see' your film clips, and where you can decide the in and out point of your shot, which you intend to import into your 'timeline,' where you have your current 'cut.' Here, 'cut' signifies the current edit of your film. The browser is just the address where the media is stored. Nothing prevents you from storing multiple addresses of the same media. Each clip has a name that

you choose and those names are listed alphabetically and not according to a narrative. This is a big drawback for me, specifically when working with unscripted material.

16. One of the films was Edgar Cozarinski's One Man's War (La Guerre d'un Seul Homme (1982)). The compilation film used newsreel footage from the early '40s and excerpts from Ernst Jünger's war diary. It goes without saying that the newsreel material somehow avoided direct representation of the front, while the diary somehow couldn't.
17. Medium-size budget ($20 million) films still do a film work print able to be screened an average of five to eight times in the course of the editing of a feature film, but most independent cash-poor productions don't have the money to do both a telecine and a film work print, and therefore screen an AVID cut (even at low resolution) to check on matters as different as focus and pacing. The increased use of extreme close-ups in contemporary films is certainly connected to the length of time you spend looking at a compressed image while editing. Obviously, a close-up is less affected by compression than a long shot and doesn't strain your eyes as much.
18. In most commercial film productions, even if shot on digital equipment, the traditional separation between sound and image is maintained, and a time code DAT recorder (an expensive machine) instead of the digital camera is used to record the soundtrack.
19. Robert Bresson advocates avoiding pleonasm between image and sound: 'When a sound can replace an image, cut the image or neutralize it. The ear goes towards the within, the eye towards the outer'; 'Image and sound must not support each other, but must work each in turn through *a sort of relay*,' *Notes on the Cinematographer* (New York: Urizen Books, 1977), p. 62.

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